Settlement Commissioner's Review of the Assessment Reports* of the Firozpur and Nuh Tahsils.

Descriptive

THE tract dealt with in these two reports comprises along its eastern boundary a strip of the high-lying land above the Jamna bank, known as Bangar, which slopes eastward down towards the Jamna and westwards down to a depression that, extending from north to south down the middle, used at one time to receive the drainage from hills, valleys and torrents in the south-west, west and north of the tract and, while retaining part of the drainage in *jhils* or swamps, conveyed part away to Bhartpur territory to the south. In the south-west corner, west of this depression, comes down the Landoha valley, the upper (and southern) portion of which is in Alwar territory. It is enclosed between two parallel ranges of low hills, the westernmost of which extends northwards so as to form the western boundary of the tract throughout, except in the north-west corner, where the Taoru plateau, sloping down west of the range, is included within the limits of the tract. The range confining the Landoha valley on the east sinks down into the plain towards the centre of the tract, and after forming up to that point the watershed between the Landoha on the west and the drainage depression on the east, there permits the former to join the latter. The tendency of the Landoha water, however, appears at a comparatively recent time to have been to turn, not south-eastwards into this depression, but northwards into the Kotla *jhil*, one of the swamps above referred to, which lies immediately under the westernmost range of hills, and it was to guide it away from this, and into the central drainage depression that one of the oldest and largest of the many embankments which are fully described in paragraph 4 of the Nuh report and paragraphs 2 and 3 of the Firozpur report, *viz*., the Kotla *band*, was constructed. Towards this central point, also, the flood water brought by torrents rising in the north in the hills of the Gurgaon tahsil and flowing southwards, had a strong inclination to turn, or such of it as was left after it had filled the swamps in the north-eastern extremity of the tract, of which the largest were the Khalilpur and Chandaini *jhils*. The object of the first series of embankments described in detail in these two reports, the series, that is, that was constructed before the first regular settlement, was to keep the flood water of the Landoha valley to the south out of these swamps and to distribute it, and the overflow from the swamps, beneficially over cultivated land, passing the surplus down the central drainage depression to Bhartpur. The originators of these embankments had for their object to drain a water-logged and unhealthy tract. In constructing the later (Kasari) embankments within this tract, Mr Maconachie had a similar object, *viz*., to keep the flood water of the northern torrents out of the swamps and to spread it over the fields. His scheme, however, also included a still later series of embankments in the Gurgaon tahsil which was intended, on the other hand, to hold up the northern torrents as near their sources as possible and utilize them there. Extended training works undertaken by the Alwar Darbar in the Upper Landoha valley have led to the utilization of more water in that State. Consequently, for ten years or more, little flood water has come either from the north or from the south, and the embankments within these two tahsils have had little work to do. These ten years, however, have been years of deficient rainfall, and it may be going too far to say that the later systems of embankments have so effectually controlled the torrents above as not only to render the original system unnecessary but also to change essentially the nature of the low-lying land in the tract now under consideration by depriving it of the flood water which was beneficial to it. The question is one that has a very vital bearing on the assessment proposed for this land.

* Sent to [illegible] 1897, respectively, and received [illegible] Financial Commissioner's Office on December [illegible]

Assessment Circles

2 The tract is divided, by an arbitrary line stretching from east to west across its centre, into the Nuh tahsil on the north and the Firozpur tahsil on the south The strip of Bangar on the east thus forms two assessment circles of that name, one in each tahsil It adjoins the circle of the same name in the Palwal tahsil, and on its eastern side receives irrigation from a distributary from the Agra Canal The depression to the west of it extending to the boundary range of hills forms in Nuh one circle under the name Dahar The portion of the Firozpur tahsil immediately adjoining it to the south Mr Gibson has found necessary to form into a small assessment circle, the Chiknot, in addition to the two circles, the Dahar Mitha and Dahar Khari, which were originally considered sufficient for the corresponding tract in this tahsil The Dahar Mitha is to the south and comprises the land which still benefits by Landoha floods in years of good rainfall, while the Dahar Khari lying to the north of this receives flood water only from the hills on either side of the valley and a further difference between the two circles is, as their names imply, that the wells are in the southern circle sweet and in the northern salt Several strips of land fringing on the two Dahar circles and lying along the skirts of the two ranges of hills already mentioned, and on either side of the eastern range, have been included in one circle, the Bhuder circle of Firozpur, of which the characteristic is a light sandy soil too high in level to be benefited by torrent floods Firozpur has thus been divided for assessment purposes into five circles, while Nuh has been formed into three only, the third being the Taoru plateau in the north-west corner of the tahsil The collection of statistics for these units of area at this settlement has shown that certain alterations may with advantage be made in the above arrangement, a matter which will be reverted to at the end of this review The following table brings together the leading statistics for the circles Well cultivation is not of the same importance that it is in the Rewari tahsil, but is considerable in the Dahar Mitha, Taoru, and Bhuder circles, wells are everywhere in this tract of the nature of an insurance against years of drought and are left unworked in years of good rain when the well area will bear a crop without the aid of irrigation The most remarkable figures are those indicating the area now under mortgage, but although these figures are enormous, against them are to be set the facts that the area sold out and out is small,* and that the mortgagees are very often fellow-landowners of the mortgagors To show the extent to which landowners are mortgagees I have given in the last line of the table percentages taken from Statement VI The percentage of cultivated area under mortgage in these two tahsils was already high at the time of Mr Wilson's Revision, *vide* page 27 of his report, being 20 and 18 per cent respectively of the cultivated area of the two tahsils, as compared with 34 and 46 per cent now

	Bangar (Nuh)	Bangar (Firoz pur)	Dahar (Nuh)	Chiknot (Firoz pur)	Dahar Khari (Firoz pur)	Dahar Mitha (Firoz pur)	Taoru (Nuh)	Bhuder (Firoz pur)
Percentage to total cultivation of *Chahi*	8	8	4		8	18	13	12
" " " *Nahri*	27	16					---	
" " *Abi* and *Dahri*		5	37	30	12	12	4	4
" " " *Chiknot, Narmot & Magda*	59	65	49	67	70	54	63	26
" " " *Dahar*	8	6	10	3	10	16	20	58
Incidence of population on square mile of cultivated area	417	517	309	295	465	491	465	468
Percentage of cultivation sold since Settlement	3	1	6	2	5	14	4	5
" " under mortgage	24	29	38	47	53	37	24	27
" by owners to owners	15	18	22	30	31	20	11	15

* The large percentage in the Dahar Mitha circle has no significance, as is explained on page 22 of the report

3. The assessing officers have, in accordance with rule, prepared two estimates of the net income to proprietors from the land, the one based on the share of the produce taken when the rent is collected in kind, and the other on cash rents. It is well to consider before examining these estimates in detail, how far they can be relied on as representative of the income to the peasant proprietors who themselves cultivate more than half the area in each circle, and which of them is the better guide in each of the various circles. For the purpose of this enquiry the percentages of cultivated land held by non-occupancy tenants paying cash rents as given in paragraph 23 of the Nuh report are deceptive, because they include all such lands irrespective of the nature of the cash rent paid. In the table below the percentages have been reduced so as to include only the land entered in column 11 of Statement XI as paying "other cash rents" and to exclude land paying at revenue rates with or without *malikana*.

Rents as a guide to assessment.

Tahsil	Circle	Per centage of cultivated land held by tenants paying	
		In kind	In cash.
Nuh ...	Bangar	7	11
Firozpur	,,	6	13
Nuh	Dahar	11	16
Firozpur	Chiknot	17	6
,,	Dahar Khari	13	21
,,	,, Mitha	7	31
Nuh	Taoru	3	17
Firozpur	Bhuder	5	18

In the three circles placed lowest in this table the cash rent estimate is clearly a better guide than the produce estimate. In the Chiknot, on the other hand, the area under rents paid in kind is much greater than that under cash rents, and although it is not so in the Nuh Dahar and in the Dahar Khari, it is of considerable importance in these two circles. And Mr. Boughey's remarks, in paragraph 24 of his report, are worthy of note, they show that in the Dahar circle, at any rate, there is a growing preference on the part of tenants to pay in kind, a recognition that this class of rent is better suited than cash to the now precarious nature of the cropping. In the two Bangar circles the larger area is under cash rents, but the remarks on page 28 of Mr Boughey's report show that the cash rents paid on canal irrigated land in the Nuh Bangar, are no true indication of the letting value of that class of land. No such objection is taken to the recorded cash rents on that soil in the Firozpur Bangar but it is stated (page 32 of the report) that its renting value is the same as that of unirrigated land. That of the best unirrigated land is meant. The above comparison shows the extent to which the two estimates can be made use of in the various circles. In deducing from them the estimate of the net income of the self-cultivating proprietor the Settlement Officer and his Assistant have considered it necessary to make allowances and reductions of various kinds, which will be considered when the assessments proposed for the various circles are discussed.

4. As the basis of the estimate of income from rents in kind, the average area cropped annually is taken of a five years' period which is different in each of the two tahsils. In Nuh the period is that of the years 1898-99 to 1903-04, excluding the famine year of 1899-1900, or the same as was taken in Rewari and Palwal. In Firozpur, with Mr. Douie's approval, Mr Gibson adopted the five years 1900-01 to 1904-05 instead, as giving a more typical average of the distribution of crops. The propriety of making a similar change in Nuh was considered but I understand that there the later cycle was held not to be any more representative than the other. In a tract where rainfall and flooding are so

Average cropped area forming the basis of the produce estimate.

variable and precarious as they are shown to be in the Rainfall Return (Statement I appended to the report) it is hard to pick out any cycle as typical of the tract, but it is noteworthy that the five years adopted in Nuh give an average cropped area which is less than the average, according to Statement X, of the 21 years ending 1905-06, among which are included 1896-97 and 1899-1900, two years of famine in the Punjab, the areas being 87 and 90 7 per cent respectively of the total cultivated area. This is for the tahsil as a whole. For the Dahar circle the difference is still more marked, the percentages being 72 8 and 78 9. For the Bangar circle the corresponding figures are 94 7 and 98 1 In the Taoru circle, on the other hand, the average for the five years nearly coincides with that of the 21 years In the Firozpur tahsil, even with the different term of five years, the average area cropped is well below the average of the 21 years in the two Dahar circles and the Chiknot though nearly equal to it in the other two circles, the percentages of cultivated area being—

	Bangar	Bhuder	Dahar Mitha	Dahar Khari	Chiknot
For 5 years	99 5	90 7	89 3	88·4	66 6
For 21 years	102 2	91 6	93	93 9	72 8

Rainfall

5. The rainfall statement* may, in this connection, be referred to It shows that the two tahsils have an average rainfall of from 23 to 24 inches, of which 20 to 22 should fall in the four months, June to September, and 2½ to 3 inches in the cold weather During the 11 years 1895-96 to 1905-06, however, the rainfall was below the average in seven years in Firozpur and in eight years in Nuh, and very often much below it; while in the previous 10 years it was only twice below it, and not badly so If regard be had to the rain of September which is so important for the Rabi harvest, and also to the rainfall of the subsequent cold weather months the deficiency of the last 11 years is also marked, as compared with the amount received in the previous 10 years It may be doubted whether even the period of 21 years for which figures are given is sufficiently long to be a representative cycle, but it may be safely asserted that a period of five years, however selected, is too short to form a safe foundation for a produce estimate for a circle or a tahsil, though it may give a fairly reliable result per acre cropped The deficiency of the last 11 years must also be borne in mind in considering another important matter, the falling off in recent years in floods from the Landoha and other torrents, which the people ascribe to the stoppage of these torrents by embankments, but which may possibly be due in a large degree to the scanty rainfall of these years This will be reverted to hereafter when the circle assessments are discussed

Produce estimate yields

6. The yields per acre adopted in the reports for the various crops are not based upon the results of experiments This is not due to experiments having been neglected, for the Settlement Officer and his Assistant have devoted much care to this branch of their work, but owing to the abnormal harvests experienced most of the experiments have had to be rejected and the area shown in Statement XII as having been made the subject of experiments is too small to afford results of any value Mr Gibson and Mr Boughey, however, have, working from the experience gained from experiments conducted by themselves, been able by inquiry from the people, and by comparison with the yields ascertained in neighbouring tracts, to formulate rates which may be characterized as full, though they are generally lower than the yields assumed by Mr Channing at the last settlement and are unquestionably fair to the people The tract is, like the adjacent land in Alwar, a fertile one, and when the rainfall enables it to yield at all, it yields well The outturn per acre is particularly good for gram and for cotton

Produce estimate prices

7 The scale of prices adopted in these two tahsils is the same as has been accepted for the Rewari and Palwal tahsils by Mr Doue as Settlement Commissioner. In Nuh and Firozpur which are more remote from the railway than

* Statement I.

the rest of the district, a lower scale might have been expected, but it is vouched for by the assessing officers that the Zamindars get the same prices for their produce here as in the rest of the district. The rise in prices which has occurred since last settlement is referred to in paragraph 13 below.

Produce estimate deductions previous to calculation of landlord's share.

8. From the assumed prices and yields applied to the assumed area is deduced the gross produce estimate for each circle. Before calculating the share of this which the landlord is entitled to receive as rent, the Settlement Officer has made the usual deductions on account of the crops which, although their value has been included in the total, are fed off in whole or part to the cattle. These deductions are very considerable in this tract, where cultivation has reached its limit and the margin available for grazing is very small; they have been very carefully thought out, and no objection can be taken to them. Nor need objection be taken to the value of the straw, which the landlord receives as rent, being written off, although theoretically half of it should be credited to the Government half of the net assets even if it is the case that the straw is not sold by the landlord but fed off to his cattle. Menials' dues are paid by the tenants from their share of the produce in both tahsils, and consequently no deduction has been made from the gross produce on this account. I have ascertained that the meaning of the remark (paragraph 31, Nuh report, paragraph 32, Firozepur report) that allowance must be made for these dues in assessing is that Mr. Gibson thinks the liability for them would be thrown on the landlord, or at any rate shared, if there were a larger area held on rents in kind. This, however, is an assumption only, and would not warrant a reduction being made in the half assets estimate: it is merely a corollary of the general criticism that where the area held on rents in kind is small, the half assets estimate based on such rents must be viewed very guardedly. The allowance made for the patwaris having underestimated the area of failed crops in the two Bangar circles may be accepted Both Mr. Gibson and Mr. Boughey in checking crop inspections in these circles have observed that the allowence given by the revenue patwaris is inadequate not only in the canal irrigated villages but also in those which are not commanded by the canal, the patwaris in these circles having acquired the system of the canal patwaris. The extent of the correction allowed on this account is a matter of conjecture only, but I believe it to be very near the mark In the case of canal irrigated crops the landlord pays a share of certain cash expenses detailed in paragraph 34 of each report, and his expenditure on this account has rightly been deducted from the value of the produce

Produce estimate, Government share

9. The value of the gross produce available for division between landlord and tenant having thus been determined the proportion taken by the landlord as rent is set aside in Statement XIII as the owner's net assets, and one half of that as the theoretical Government share. As regards *nahri* crops this calculation has been made for each crop separately in consequence of the cash expenses shared by the landlord The Settlement Officer in paragraph 34 of his report expresses his opinion that the proportion is higher for unirrigated land than would be given by the tenant if kind rents were more general than they are, but the half asset estimates as framed are in accordance with the existing practice, and may be accepted, subject to the general criticism referred to above, as guides in the few cases where kind rents are more generally paid than cash.

Adequacy of the produce for the needs of the population

10. The usual comparison has been made for each tahsil* between the gross produce of food grains and the probable annual food consumption of the total population, rural and urban. The annual deficit works out to 12 per cent. of the food required for Firozpur and 10 per cent. for Nuh. In view of the remarks in paragraphs 4 and 5 above on the average cropped area taken as the basis of the produce estimate, the wonder is that the apparent deficiency is not greater. The area is less than the average area of the last 21 years, and, though the population of these two tahsils were not distressed in the famine of 1896-97 and held out bravely in the second famine year of 1899-1900† there can be no doubt that grain had to be imported for food in these two years, and the average

* Paragraph 38, Nuh report, paragraph 39, Ferozpur report.
† Paragraph 38, Punjab Famine Report of 1896-97, and page 9, Volume V of the Report of 1899-1900.

produce for the whole period may actually have been little in excess of the local requirements and may even have been below it. But it is more probable that here, as elsewhere where similar estimates have been worked out the deficit is apparent only, and is a proof that the produce estimate has been, as it ought to be, based on rates of yields which are those of the average field in the average year, and therefore gives a result below the actual produce of all fields in a year of fair harvests. The tract is not well served by railways and it is consequently impossible to test the estimate by comparison with railway returns, but Mr Gibson is of opinion that in ordinary years there is no import of food-grains, and his conclusion may be accepted that, except in years of drought, the tract is self-supporting in respect of food and has a surplus produce of cotton and wheat for export

Half asset estimate derived from cash rents

11 Cash rents undoubtedly afford the better guide to assessment throughout the greater part of the tract They are paid on even a larger area than appears in the returns, for the meaning of the remark at the top of page 26 of Mr Boughey's report is that a certain area of land shown as cultivated by the owners is really held by them as tenants of others to whom they have mortgaged it by a form of deed not recognised by the Land Alienation Act, and who are therefore not recognised as mortgagees in our papers Transactions of this sort are also referred to at the end of paragraph 16 of the Nuh report Very great care has been exercised by the assessing officers in sifting the recorded rents and in rejecting those which are unsuitable as guides owing to there being rack rents or for other reasons, but a considerable area remains after this process (*cf* Statements XIV and XV) on which the rents paid indicate clearly the letting value, not only of nearly every circle as a whole, but also of the various classes of soil The only matter in respect to which the estimates based on these are open to criticism is the allowance made on account of non-realization and cost of collection. The allowance of 5 per cent made on this account in the Rewari tahsil was based on the accounts of a Court of Wards' Estate, and similarly in Palwal the deduction of 12 per cent was justified by the books of the Skinner Estate In the tahsils now under consideration returns of similar accuracy and importance have not been available, and yet for most of the circles the deductions made on this account are greater than those of Rewari and Palwal, being 30 per cent in the Dahar Khari, 25 per cent in the Nuh Dahar, 15 per cent in the Dahar Mitha, Chiknot and the two Bangar circles, 10 per cent in the Bhuder, and 5 per cent in Taoru These allowances are liberal, and seeing that they are, to some extent at any rate, covered by the remissions granted under our system of land revenue collection, I think that the resulting half asset estimates based on cash rents may be accepted as very moderate ones Only in two circles are they in excess of the corresponding estimates based on rent in kind, which have themselves been framed in a liberal manner, and on a contracted crop area, and in most circles they are much below them —

	Bangar Nuh	Bangar Firozpur	Dahar Nuh	Chiknot	Dahar Khari	Dahar Mitha	Taoru	Bhuder
	Rs	Rs	Rs	Rs	Rs	Rs	Rs	Rs
Half assets produce	1,51,408	1,11,586	1,26,093	16,188	46,775	53,579	59,900	55,650
Half cash rents	1,17,350	1,06,810	1,11,785	15,170	46,841	55,097	49,507	51,712

The four Dahar circles. Reasons assigned for proposing a reduction of assessment

12 The most difficult question in the assessment of the two tahsils is the treatment of the Dahar circles, I therefore take them first in discussing the proposed assessments. Their present assessments are given below*, with the percentage they bear to the half asset estimate now framed, and the assessments proposed by the Settlement Officer or Assistant Settlement Officer In the Chiknot circle the half asset estimate is that based on rents in kind

* From Statement XVI.

In the other circles it is the estimate based on cash rents One-sixth of the value of the gross produce is also shown in the table for comparison—

Name of Circle.	One-sixth of value of gross produce	Present revenue	Percentage on half assets	Revenue proposed by Settlement Officer	Percentage on half assets
	Rs	Rs		Rs	
Dabar Mitha	47,690	47,276	85	45,245	82
Dabar Khari	41,635	37,411	83	35,011	77
Chaknot	14,490	14,151	87	12,503	82
Dabar Nah	1,85,968	1,01,231	99	95,672	81

A reduction is thus proposed in each case, and, while there are reasons special to each circle for the Settlement Officer proposing this course and for arriving at the exact amount of reduction proposed, the main reasons are common to all, and may conveniently be discussed in this paragraph. There has been a diminution in the area annually flooded by torrents or drainage from the hills, and this flooding, however insalubrious it may have been, was always beneficial to the agriculturist and allowed of a better class of crops being grown than can be produced with the aid of rainfall alone. The extent to which this has occurred is indicated by the figures in columns 7 and 8 on page 13 of the Hirozen report, but is a matter of inference only as regards the Nah Dabar (paragraph 10 of that report). The figures in Statement X also bear [illegible] to it, for they show that the falling off in the area cropped in the last [illegible] compared with the previous ten years is much more marked in the Rabi than in the Kharif, and the Rabi is the more important harvest of the two on flooded lands. Owing partly to the deterioration of the Dabar circles in this respect, but still more, probably, to the long cycle of bad years, with their [illegible] of scarcity and famine, the people have become impoverished, and have been driven to mortgage large areas of their land to provide themselves with food. With a more thrifty population the result of bad years might have been less serious, but with the character of the Mens being such as it is (paragraphs 13 and 14, Hirozen report), a curious mixture of thriftlessness and [illegible], [illegible] accept the result. They are the more liable to suffer from bad years [illegible] the pressure of the population on the area of cultivation is [illegible]. And they have little miscellaneous income; very few of them [illegible] and the grazing is barely sufficient for [illegible] and the wells. Mr. Gibson thinks that [illegible] estimates are true only for the [illegible] rent to half net assets of the [illegible] [illegible]

[illegible]

[illegible]

for Palwal was modified in Mr Doule's review, paragraph 7, but as to the reality of the rise, and especially in respect of cotton and wheat which are the chief marketable articles in the circles now under consideration, there can be no doubt, and in the forecast of the financial results of this settlement it was anticipated that the revenue might be enhanced 15 per cent on this account alone. The tenants who have to pay cash rents have to sell produce in order to pay them, and the figures on pages 26 and 32 respectively of the Nuh and Firozpur reports show that cash rents have gone up steadily, no doubt in response to the rise of prices. Mr. Gibson is right in saying that the rise is largely discounted by the fact that the revenue payers are peasant proprietors, and the remarks in paragraph 377 of the Settlement Manual are very pertinent in regard to this tract But the improvement in resources due to rise in prices cannot be ignored altogether, especially when it is borne in mind that there is no separate tenant class in this tract, and the tenants are themselves proprietors who add to their assets by cultivating such land as they can get on rent from others I may note that Mr. Gibson thinks that this circumstance tends to keep rents low, or at any rate fair, rather than high, because when a tenant has no land of his own he is at his landlord's mercy It has also to be borne in mind that a number of the owners are sufficiently well off to be mortgagees themselves, and these draw rent from the mortgaged land. Then we have to bear in mind the manner in which the existing demand was arrived at, and the facility with which it was paid during the greater part of the period of the expiring settlement The revenue assessed by Mr. Channing at the Second Regular Settlement was based on the experience of abnormally favourable years, and it was very soon put to the test by a series of bad seasons including the famine year of 1877-78, with the result that it was very carefully revised by Mr Wilson from village to village in the light of the more normal, or less favourable, years that had supervened The resulting demand, which is practically that now in force, was admittedly paid without difficulty up till 1895 (paragraph 38 of the Firozpur report) and the suspensions which were granted in subsequent years, and which are conveniently tabulated on pages 39 and 50 of the two reports, were no more than might be expected to be required out of a fair assessment in abnormal years The suspended revenue was for the most part collected without difficulty in the good years which intervened between the bad, and the amount which it was ultimately found necessary to remit was equivalent to half-a-year's revenue in the Nuh Dabar, and to rather more than that in the Dabar Khari and rather less in the Dabar Mitha, though in the small Chiknot circle it was equal to nearly two years' assessment The danger of generalizing from the experience of a few good years was illustrated by Mr Channing's settlement, and there is at least a possibility of our being led now by the experience of a series of bad years to fix the Government demand at an unduly low pitch Even the strongest argument for the reduction of assessment, the falling off in the flooded area, does not rest on entirely secure ground, for the falling off may be due as much to a prolonged deficiency of rainfall as to the action of embankments in stopping floods And while the density of population must be admitted to be great (the figures are given in paragraph 2 above), it is less than the incidence of rural population per square mile of cultivated area in many districts of the province, and considerably less than in these districts which are generally conceded to be congested

Settlement Commissioner's opinion as to proposed reduction.

14 My opinion is, on a review of the circumstances telling for and against the proposed reductions, that there is on general grounds no case for a reduction The fact that the present assessment forms a high percentage of the half asset estimates is not in itself an argument, especially when we consider how carefully these estimates have been framed so as to exclude any chance of their being unfair to the revenue payer We cannot judge of an assessment by arithmetical rule, and when the question is whether to reduce or not, the main fact to be considered is how the assessment has worked The existing revenue seems to have stood this test The people, and they are evidently numerous, who take land on mortgage, find no difficulty in paying the revenue, and if those who have been driven to mortgage have found a difficulty, it is not because of the pressure of the revenue but because owing to large families and bad years, they find it hard to get a living at all. In dealing with the question of maintaining the

present high pitch of assessment I have been led to consider whether the system proposed by Mr. Wilson as Settlement Commissioner in paragraph 17 of his review of Mr. King's Sirsa Assessment Report might not suitably be applied to these two tahsils, and I should be inclined to advocate its adoption, were it not that the recent revision of the rules for the suspension of land revenue, and for the remission and collection of suspended land revenue, the result of which is given in the last edition of Revenue Circular 31, seem to sufficiently secure the objects aimed at. If the Settlement Officer, in framing his scheme for suspensions and remissions of land revenue, has regard to the provisions of paragraphs 10, 12, 13, 22 and 23 of that Circular, and if the scheme is carefully worked by the Deputy Commissioner of the district, I think no hesitation need be felt in at least maintaining the present assessments of the Dahar circles. Paragraphs 13 and 22 in particular give a very wide discretion in differentiating between the impoverished and the well-to-do landowners in the matters of suspension and of the collection or remission of suspended land revenue, and in order to maintain the present pitch of the demand no further differentiation in assessment appears to me to be necessary. The proposals in regard to each circle may now be considered briefly.

Circle Dahar Mitha

15. The Dahar Mitha is in some respects the best of these four circles: it has a very fertile soil and gets whatever flooding there is to be had from the Landohi. It is better protected by wells than any other circle in the two tahsils, and the wells are sweet. Sixty masonry wells have been sunk since last settlement, and so, even if the revenue is not reduced, there will be a considerable amount of remission of revenue owing to the grant of protective certificates for the wells sunk within the last 20 years. It will be observed that the percentage of *chahi* soil to total cultivation is given as 15 on page 15, and that of [illegible] irrigation as 8 on page 54 of the report. The latter figure represents the average area watered from wells in the year, on an average of years, while the former represents the total potential area, or the area protected by wells. It is to the latter area that the revenue rate sanctioned for *chahi* soil is applied for the purpose of framing the jama in the report, but in practice the soil will be assessed, as has been done in Rewari and Palwal, at the *barani* rate suitable for the soil, while the excess yielded by the application of the *chahi* rate will be taken in the form of a lump *abiana* on the well. I understand that this system has been generally accepted in Rewari by the people in the distribution of revenue over holdings. Mr. Gibson proposes a reduction of nearly Rs. 2,000 in the revenue of the circle on account of the loss of Landohi flood, the [illegible] area having contracted from 8,147 to [illegible] acres. How far [illegible] it is difficult to say, and against this has to be [illegible] of [illegible] *chahi* soil, and [illegible] [illegible] I [illegible] inclined to propose an increase [illegible]

[illegible]

16. [illegible] standard of [illegible] Dahar Khara [illegible]

[illegible]

higher here than in the other circles and it amounts to 87 per cent of the half asset estimate, but I do not think it need be reduced. I would raise Mr. Gibson's *barani* rate to Re. 1-4-6 so as to obtain an assessment of Rs 14,066 for the portion of the circle under fixed assessment. The *abi* rate is sufficiently high.*

Area under fluctuating assessment in the Chiknot circle and the Nuh Dahar circle

18 It almost follows from the above that no change should be made either in the rates or in the system of fluctuating assessment in force in the Kotla Jhil villages of the Chiknot and the Nuh Dahar circles. The system is described on pages 38 and 45 of the Nuh report and on page 63 of the Firozpur report, and with reference to the remark at the end of paragraph 46 of the latter, Mr. Gibson informs me that he has no further report to make and that his proposals stand. I recommend that the rate of Rs. 2 per acre of matured crops be maintained in these villages, and that, as now, land which has paid for a Kharif crop should not be charged for a crop sown in the following Rabi The villages in the Chiknot circle which are subject to this system should, I think, be transferred from the Firozpur to the Nuh tahsil. Mr Gibson agrees with me in this, and will submit proposals to that effect. I have also asked him to consider whether the whole of the Chiknot circle might not appropriately be transferred to the latter tahsil and merged in its Dahar circle

Nuh Dahar circle area under fixed assessment

19 In the portion of the Nuh Dahar circle which is under a fixed assessment, the area recorded as flooded shows no diminution as compared with last settlement, the total of *dahri* and *abi* being nearly equal to the *dahri* area of settlement Similarly, little change is shown in the area recorded as *chahi*, although 110 new masonry wells have been sunk during the term of settlement The chief reason for the reduction proposed by Mr Boughey is the large area under mortgage. The present demand is 90 per cent. of the half asset estimate, but the latter includes a deduction of 25 per cent. from the amount of cash rents to allow for non-realization I would not increase the demand, but I think the present revenue may be maintained. To attain this result I would accept the *bhur* rate proposed by Mr Boughey, and adopt Re 1-8-0 as the rate for *chahi* and flooded land and Re. 1-5-0 as that for superior *barani* soil

Circle Taoru.

20 The Taoru table land receives drainage from the hills which nearly surround it, and has 13 per cent of its area protected by sweet-water wells. There has been a slight increase in cultivation, and the *chahi* area has risen greatly, 74 new masonry wells having been constructed during the term of settlement in addition to 33 old wells repaired and brought into use. The state of mortgage is not serious, and the people are not in distress The present demand is 74 per cent of the half asset estimate based on cash rents, which is the proper one to adopt for guidance in this circle The remark on page 27 of Mr Boughey's report, that cash rents are not common in Taoru scarcely expresses what is meant Cash rents are common enough in the circle but Mr Boughey thinks that although the best land is not given out on rent, the competition for the land that is so given out is very keen, and the rents rule very high For this reason he is rather disposed to distrust his rent estimate, and this may have influenced him in proposing the moderate enhancement of 14 per cent. on the present demand. The proposed demand, Rs 42,214, amounts to 85 per cent (and not 82 as given on page 44 of the report) of the half asset estimate of Rs 49,507, and we should not, I think, go higher, though this amount can safely be taken The revenue rates proposed by the Assistant Settlement Officer are suitable

Circle Bhuder.

21 The strips of land forming the Bhuder circle are differently situated from the Taoru plateau, and the prevailing soil is the light sandy *bhur* It has 22 per cent of its area protected by wells, and the *chahi* area has increased since last settlement, 122 new masonry wells having been sunk and 65 repaired The

* Mr Gibson, who has seen this review, writes — 'If the present assessment is maintained in this circle, I think it can only be successfully maintained if the proposal which I shall make of giving mutual remissions (at any rate up to a certain percentage of the demand), instead of suspensions, be accepted.'

circle is in a prosperous condition, but the existing demand (Rs. 44,420 by Statement XVI) is 85 per cent of the half asset estimate based on cash rents, and I agree with the Settlement Officer that it would not be prudent to take any enhancement. The rate of 11½ annas an acre is sufficiently high for the *Bhur* which is the chief soil of the circle, and the other rates are suitable. The result of maintaining the present demand unaltered will be that a considerable portion of it will be remitted for a time on account of protective certificates granted to new wells, but this position is in accordance with the Government policy of affording encouragement to well-sinkers.

22 The following is the composition of the three canal irrigated circles of the district :—

The Bangar circle of Nuh

Name of Circle	Palwal Bangar	Nuh Bangar	Firozpur Bangar
Percentage of Chahi soil to cultivation ...	10	6	5
Percentage of Nahri	34	27	16
Percentage of Superior Barani	48	59	65
Percentage of Bhur .. .	8	8	6
Percentage of Abi and Dabri	...	..	5*

It would have simplified the assessment of the Nuh Bangar if the circle had been sub-divided into two, the eastern containing the canal irrigated villages, and the western those which are not commanded by the canal. Mr. Bagshey notes that the former, before the introduction of the canal, were inferior to the latter and consequently received at last settlement comparatively light assessments which have become lighter still now that the villages have the advantage of canal irrigation. The western villages on the other hand are [illegible] to the neighbouring villages of the Dahar circle, though stronger because of [illegible] population. It may be noted that wells are little [illegible] in the tract commanded by the canal, and the large increase which has occurred in the number of wells has been confined to the western belt of villages. The latter [illegible] enhancement [illegible] in the former a very substantial increase [illegible]. Mr. Bagshey's tentative village to village assessments have been framed on this principle, but when the results are brought together in the total for the circle the only way to judge them is by examining the rates [illegible] for the different soils.† As regards the most important rate in this circle, [illegible] soil, it has been observed in paragraph [illegible] that the cash rents [illegible] true indication of the letting value of the [illegible]. The rates [illegible] on page 34 of the report from the produce estimate are [illegible] objection, but they are crop rates and not soil rates. From [illegible], however, Mr. Bagshey has worked out [illegible] (see Appendix [illegible]) [illegible] rates for chahi and [illegible] land. The result [illegible] pages 156 and 45 of the report that the [illegible] half-net assets [illegible] per acre. [illegible] may be accepted. [illegible] rates which Mr. Bagshey [illegible] whole valuation of the circle [illegible] rates —

1	2	3	4
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

From the percentage of half assets taken on *barani* and *bhur* soils it is clear that the revenue of the uncommanded villages will be maintained at a sufficiently high pitch The pitch of the assessment on *nahri* land will be nearly the same as has been proposed by Mr Douie for Palwal The assessment for the circle proposed by Mr Boughey, Rs 1,14,207, therefore appears to me to be suitable If Mr Douie's recommendation in his Palwal review is accepted, that the *nahri* soil should be given a fixed assessment in its unirrigated aspect and that a fluctuating canal advantage revenue should be charged in addition on the land actually irrigated in each harvest, the fixed land revenue on *nahri* soil at Re 1-3-6 per acre, the *barani* rate approved above, will be Rs 28,364, as compared with Mr Boughey's proposed fixed assessment of Rs 39,273, so that to attain the latter pitch it is necessary that the canal advantage rate should yield Rs 10,209. This result would be given by applying a rate of 10 annas an acre to the average area annually irrigated, which is 17,675 acres according to the upper table on page 12 of the report, and 17 290 according to the lower In view, however, of the fact that Mr Boughey felt himself limited, in proposing an assessment of a fixed nature, to a moderate enhancement only, I think that with a fluctuating assessment a rather larger increase can be taken and I propose that in this circle the rate of fluctuating assessment should be 11 annas an acre, which would yield an average of Rs 11,152 As contemplated by Mr Douie in his explanation of his proposed system in his reviews of the Karnal and Gohana reports, while the income from the rate should average 11 annas per acre for the circle, the actual rates framed for different villages may be greater or less than this as the Settlement Officer may consider appropriate, and the area under millets should be exempted from payment of the rate

The Bangar circle of Firozpur

23 The difference between commanded and uncommanded villages is less marked in the Firozpur Bangar, for Mr Gibson reports that the expiring assessment is light for the circle as a whole The large increase of wells has here also been confined to the uncommanded villages The half asset estimate based on cash rents should in this circle be a more suitable guide to the assessment than the produce estimate It is remarkable, however, that the rent should distinguish so little between the various classes of soil other than *bhur* and from his remarks on the *barani* rate on page 57, Mr Gibson seems to have come to the conclusion that the process of correction of which the results are given in the table on page 32 of the report was carried too far in the direction of lowering the *chahi* and *nahri* rent rates He has consequently, in his proposed revenue rates, proposed to take a much larger proportion of the half assets estimate in the case of these soils than in the case of *barani* and *bhur*, as the following table shows, thus giving a result of an opposite nature to that shown by the analysis above of the Nuh Bangar rates :—

1	2	3	4
Soil	Half asset rate	Rate proposed by Settlement Officer	Percentage of column 3 on column 2
	Rs a. p	Rs a p	
Chahi . . .	1 12 6	1 9 0	88
Nahri . . .	1 12 6	1 9 0	88
Barani	1 9 6	1 4 0	78
Bhur	0 12 6	0 10 0	80

It is a question whether in these circumstances the produce estimate of Rs. 1,11,586 is not a more reliable guide than the cash rent estimate of Rs 1,06,810 for the circle (although in respect of differentiation between soils it goes no further than the latter), and whether the revenue should not be enhanced further than the Settlement Officer has proposed. If the difference of 5 annas

between the proposed *nahri* and *barani* rates is applied to the 10,675 acres of *nahri* fixed and the result, Rs 8,336, is distributed over the average canal irrigation of 8,955 acres (page 18 of the report), the quotient gives a rate of 6 annas only for application as the canal advantage fluctuating rate for the circle. This is certainly too low. The rate should not average less than 8 annas an acre for the circle. It should be differentiated from village to village as proposed by Mr. Douie, and the area under millets should be exempted from payment of the rate. The rate proposed by the Settlement Officer for *barani* soil, which will also under the system proposed by Mr. Douie be applied to *nahri* soil, might be slightly increased, and the assessment which I would propose for the circle is—

Soil	Rate	Area.	Demand	Total
	Rs. a. p.	Acres.	Rs.	Rs.
Chahi	1 9 0	5,690	8,891	...
Nahri	1 9 0	754	1,178	...
Barani	1 4 6	45,241	56,957	...
Bhur	0 10 0	4,147	2,592	...
Nahri fixed	1 4 6	10,675	13,677	...
Nahri fluctuating	0 8 0	8,955	4,478	83,815

This would give [illegible] per cent. of the half net assets estimate based on cash rents and 80 per cent. of that based on collection in kind, and would be an enhancement of the present demand by 18 per cent.

24. The Settlement Officer's instructions for the assessment of the area benefited by the [illegible] constructed by the District Board or by Government and [illegible] Punjab Government letter No. 232-S, dated [illegible], Mr. Gibson [illegible] proposes in regard to [illegible] of the [illegible] to [illegible] present on the [illegible] given to [illegible] fixed [illegible] rates on [illegible] The fixed rates proposed [illegible] enough to take account of the benefit derived from the [illegible] following instances—

(1) [illegible] *Tahsil*.—Irrigation from the [illegible] Hissar [illegible] charged at 10 [illegible] or Rs. 1 per acre, [illegible]

(2) [illegible] *Tahsil*.—Irrigation from the [illegible] the Sh[illegible] [illegible]

(3) [illegible] *Tahsil*.—[illegible] Rs. [illegible]

(4) [illegible]—[illegible] [illegible] *Tahsil* [illegible]

[illegible]

report and in paragraph 44 of the Nuh report. In regard to the rules for the annual assessment of *abiana* framed in paragraph 52 of the Firozpur report, it is sufficient to say at present that, with the modification to suit the Nuh tahsil proposed in paragraph 48 of Mr Boughey's report, they are generally suitable The principles on which they have been framed appear to me to be sound, but they will have to be recast when the assessment of the Gurgaon tahsil is completed, and an opportunity will then occur of finally considering them before they are published under Section 74 of Punjab Act III of 1905

Results

25. The following are the proposals which I put forward for the assessment of the various circles —

Circle		Present demand	Revenue proposed by		Increase or decrease proposed by	
			Settlement Officer	Settlement Commissioner	Settlement Officer	Settlement Commissioner
		Rs	Rs	Rs	Rs	Rs
Dahar Mitha		47,276	45,348	47,276	—1,928	
„ Khari	„	37,411	35,911	37,411	—1,500	
Chiknot fixed		14,151	12,503	14,151	—1,648	
Bhader		44,420	44,420	44,420		
Bangar	Fixed	79,661	80,767	85,325	+7,106	+10,157
	Fluctuating			4,493		
	Total Firozpur tahsil	2,22,919	2,24,049	2,33,076	+2,030	+10,157
Dahar		1,01,251	95,672	1,01,251	—5,579	
Taoru		36,501	42,214	42,214	+5,713	+5,713
Bangar	Fixed	1,00,360	1,14,207	1,03,299	+13,847	+15,091
	Fluctuating			12,152		
	Total Nuh tahsil	2,38,112	2,52,093	2,58,916	+13,967	+20,804

I have taken the present demand, and the Settlement Officer's proposed demand where he proposes no change, from Statement XVI, to secure uniformity; the above figures therefore differ to a small extent from those given in the body of the reports The fluctuating assessments of the Kotla Jhil villages in the Chiknot and the Nuh Dahar circles and the *abiana* to be levied on the areas benefited by *bands*, are not shown in the above table, as the amounts will vary so from year to year that it is difficult to frame accurate estimates It will be necessary for the Settlement Officer, however, to frame forecasts of the income from each before the new assessments are introduced And he has also to prepare an estimate of the portion of the fixed assessment which should be credited to the *bands*

Changes in assessment circles and classification of soils

26 It has been suggested above that the Chiknot circle might be transferred to the Nuh tahsil The Settlement Officer now thinks that the division of the Dahar tract of Firozpur into two was unnecessary for assessment purposes, and I agree with him and am of opinion that the Dahar Khari and Dahar Mitha should in future be treated as one circle The minute sub-division of superior *barani* soil into the three classes of *chiknot*, *narmot* and *bhur*, which was adopted at the beginning of the settlement, was found to be superfluous for the purposes of the settlement, as will have been observed from the rates proposed in the various circles, and under Mr Doune's orders it has been arranged to show them under one heading in future, and this has been provided for in the village note-book forms

27. The subject of protective leases for wells in this district is being discussed in separate correspondence with the Financial Commissioner. The general rules for remission on on wells falling out of use should be extended to the tahsil; the system of distribution of the assessment over wells has been touched on in paragraph 15 above. The rules referred to in paragraph 51 may be approved, as recommended by Mr. Doulie in paragraph 12 of his Palwal review.

28. The new demand should be introduced with effect from the Kharif harvest of 1908. The cesses should be as at present (paragraph. 54 of the Settlement Officer's report). The term of Settlement will be determined later for the district as a whole. The question of the remission of the land revenue at present held under suspension should be referred separately in accordance with the orders of Government on the proposals in that regard for the Rewari tahsil.

Paragraphs 28 and 57 of the title reports

29. Mr. Gibson's report is a very thorough piece of work and it bears marks of his strong sympathy with the people. Mr. Bougbey has carefully followed the Settlement Officer's methods but his report shows originality also, and is a good one.

Dated 8th January, 1908.

A. H. DIACK.

APPENDIX.

In order to work out a soil rate for the irrigated soils (*chahi* and *nahri*) in the Bangar circle I have adopted as far as possible the same calculation as that given in paragraph 36 of the Rewari report For the *chahi* rate I have taken the areas in Statement III. This gives a pakka *chahi* area of 4,868 acres of which only 2,187 acres are annually irrigated The remaining 2,681 acres are sown with *barani* crops In the Rewari circle with a light soil Mr Gibson could fairly assume that either *jowar* or *bajra* would be grown I do not think it would be safe to make this assumption in the Bangar circle, where *rabi* crops are grown *barani* on well lands, and I have accordingly taken the rate per acre matured given in column 33 of Statement XIII In paragraph 27 I have assumed an unirrigated failed area of 28 per cent This is nearer $\frac{1}{4}$ than $\frac{1}{3}$, but for the purposes of a calculation such as this I prefer to regard the figure 28 as a minimum and I therefore assume that only 2/3 of the *barani* area matures The calculation is therefore —

$\frac{2187 \times \text{Rs } 2\text{-}8\text{-}0 + 2681 \times \frac{2}{3} \times \text{Re. } 1\ 13\ 0}{4868} = \text{-}1\text{-}12\text{-}3$ per acre For the *nahri* area there is no statement corresponding to Statement III and I have therefore taken the average area irrigated as shown in paragraph 11, while for the whole *nahri* area I have been obliged to take the figures in Statement II, which are those for the year 1905 06. This is not very satisfactory, but it is, I think, the nearest approach to accuracy which we can get The calculation in this case is $\frac{17290 \times \text{Rs } 2\ 9\ 0 + 5946 \times \frac{2}{3} \times 1\ 18\text{-}0}{23236} = 2\text{-}3\text{-}5$ per acre In each case the irrigation rate is that shown in the table given in paragraph 34 The following table compares these rates with the cash rents and my proposals —

	Chahi			Nahri.			
	Rs	a.	p.	Rs	a.	p.	
Soil rate by kind rents	1	12	3	2	3	5	
Cash rent rates	1	13	9	2	4	0	Assu med
Proposed rates	1	8	0	1	11	0	

The two *chahi* rates agree very closely, and so do the *nahri* rates, but the compa there is of course vitiated by the fact that the rate shown is an assumed and not an a rent, and also because the calculation is not quite so accurate as that for the *chahi*, si think we may say that the difference would not be strikingly great and that consequentl correpondence is there, too, fairly close.

18*th December* 1907. G. M. BOUGHEY.

ASSESSMENT REPORT

OF THE

FIROZPUR JHIRKA TAHSIL

OF THE

GURGAON DISTRICT.

PART I.—PRELIMINARY.

CHAPTER I.—PHYSICAL DESCRIPTION.

Boundaries and Dimensions.

1. The Firozpur Tahsil is the most southern of the tahsils of the district: it is bounded on the north and east by the Nuh and Palwal Tahsils, on the south by the Muttra District of the United Provinces and by the State of Bhartpur, and on the south-west and west by the State of Alwar. The area of the tahsil is 316 square miles, and the population at the Census of 1901 was 1[illegible]2,257. It contains 244 estates as compared with 229 at last settlement, 15 villages having been transferred from the Nuh Tahsil at the end of the settlement operations.

Physical Characteristics. (a) The [illegible]

2. The tahsil is divided into two parts by a spur of the Aravalli range which traverses its centre in an unbroken line from south to north. Between this and another nearly parallel spur of the same range, which forms the western boundary of the tahsil, lies the Firozpur valley, famous from the earliest times for its fertility and for the beauty of its cultivation.

The lands lying under the hills are sandy and very inferior, but those in the centre of the valley lie low and are flooded during the rainy season by water from the Landoha stream which enters the south-west corner of the tahsil from the Alwar State and by numerous torrents flowing from the hills which enclose the valley on either side. The prosperity of this part of the tahsil depends mainly on regular flooding from the Landoha, which brings down a most fertilising silt and causes the land which it floods to yield extraordinarily heavy crops of wheat. The smaller torrents deposit sand, and their water is not nearly so beneficial as that of the Landoha.

As this stream rises in Alwar and irrigates a large area in the Ramgarh Tahsil of that State before entering the Firozpur Tahsil, considerable difficulty has always been experienced in maintaining fairly the respective rights of the Alwar and [illegible] zamindars.

Full details of the arrangement arrived at at last settlement are given in Section [illegible] of the Gurgaon Settlement Report, and the correspondence on the subject was forwarded to the Punjab Government with No. [illegible], dated [illegible] April 1877, from the Settlement Secretary to Financial Commissioner, Punjab, to the Secretary to Government, Punjab. [illegible] of the [illegible] brought up to date in paragraph [illegible] of the [illegible] Assessment Report of the Ramgarh Tahsil of the Alwar State, [illegible] [illegible] [illegible]

[illegible]

" It then enters the Ramgarh Tahsil, flowing at first due south under the hills to Bandoli. At Kharkhari it is joined by the drainage of the considerable valley formed by what has been called the Landoha range. From this point the stream ran originally due east to Naugaun, and thence north-east into the Firozpur valley which thus got most of the water.

" The Jats when they held sway over this tract towards the end of last century (see page 200, Gurgaon Settlement Report) made a large earthen embankment at this point, which diverted the water to the south and then by a semi-circular sweep brought it back to rejoin its old channel near Naugaun; but before reaching this point the Jats constructed another embankment across the new channel at Karaoli, which gave them the power of diverting the supply through the hills at Karaoli to the south-east of the Ramgarh Tahsil, or of turning it north through the old channel into Firozpur The result of this measure was to considerably extend the irrigation in the Ramgarh villages and reduce the supply for Firozpur.

" No difficulty arose as long as both Firozpur and Ramgarh remained under Jat rule, but immediately they came under rival and separate interests, disputes began and continued till the Settlement of the Gurgaon District in 1877, when a joint decision for the future distribution of the water was arrived at by Mr. Channing, the Settlement Officer of Gurgaon, and Major Cadell, Political Agent of Alwar. This was sanctioned in the Punjab Government letter No 1639, dated 1st September 1877; and as the dispute may crop up again, the understanding come to may be explained here by reference to the attached plan.

" (1). No obstruction is to be placed by Alwar in the channel D-D through which the water passes on to Firozpur.

" (2). The Jat Bund No. 2 is to be maintained by Alwar so as to prevent in all seasons any portion of the stream passing to the east at that point through the channel C-C.

" (3). A small masonry dam has been constructed F at the mouth of the channel E-E (through which the stream could formerly be diverted south-east) 2 feet higher than the level of the main channel at the point marked G, which is also defined by a masonry floor, so that the stream should ordinarily follow the channel D-D and thus re-enter its old channel north-east to Firozpur instead of being diverted south-east to Ramgarh

" (4) The Gurgaon authorities to have right of inspection so as to assure themselves of the observance of the arrangement arrived at.

" I have more than once inspected the place, and am satisfied that in the working of the above arrangements the Ramgarh villages have not suffered At present more water seems to find its way through the channel E-E than through D-D, and there is also sometimes a spill through the embankment C-C by means of a sluice provided for the purpose The latter, however, seems a precaution necessary for the safety of the "bund."

" The value of the Landoha, from an Alwar point of view, depends on the maintenance of the Landoha Jat Bund No. I at Kharkhari opposite the gap in the hills to prevent the stream breaching the banks and taking a direct course east to Naugaun and Firozpur through its old channel Accordingly, of recent years the embankment known as the Atria Bund has been much strengthened and extended north and south, parallel to the hills, at a cost of over Rs 76,000 and is now 6½ miles long, of which 4,059 yards are faced with masonry Notwithstanding these measures, in seasons of high flood the water escapes round the northern extremity or through the outlets in the masonry embankment towards Akhlimpur, Mubarakpur, and Naugaun, where they rejoin the channel D-D "

It is difficult to ensure the maintenance of the masonry wall at F When I inspected this point of the works last April, I found the wall breached, and this was the case in 1902 when it was inspected by the District Engineer of Gurgaon under the orders of the Deputy Commissioner. Instead of seeing that the works were inspected regularly every year the Gurgaon authorities have very rarely exercised their right of inspection, and the local Tahsildar has generally been ignorant of the fact that there was anything for him to inspect.

The important fact from the Firozpur point of view, is the recent lengthening and strengthening of the Atrn Bund, which instead of being a low earthern "dhol" as at settlement is now a dam 6½ miles long faced throughout half its length with masonry. This alteration which was completed I believe in 1897 was first brought to the notice of the Deputy Commissioner, Gurgaon, through a visit paid to the spot in 1902 by Mr. Macgregor, District Engineer. Extracts from the correspondence which ensued between the Political Agent, Alwar, and the Deputy Commissioner, Gurgaon, will be found at the end of this report. The Deputy Commissioner apparently acquiesced in the view taken by the Alwar authorities, and no further representation was made.

As since the commencement of the settlement operations numerous petitions have been presented by Gurgaon zamindars against the new bund, to the construction of which they attribute the almost total cessation of flooding since 1897, I inspected the bund on August 11th in company with the Chief Revenue Officer of the Alwar State. I rode along the bund from its southern extremity opposite Bandoli up to the opening in front of Kharkhari where the small earthen bund shown in Mr. Channing's map used to be. For the first mile the bund is of earth only, thence onwards up to Kharkhari, and for some distance north of Kharkhari, the inner face of the bund is strengthened with a strong masonry wall. Near Kharkhari there are a number of masonry outlets, which when the floods run very high allow some of the water to escape over into the old channel, and thence due east to Naugaon. No one in Alwar seems to know when the original Atrn Bund, shown in Mr. Channing's map, was lengthened, but it must have been done gradually after last settlement, as from papers which I was shown in Alwar it is clear that what was done in 1892 when Mr. Macdonald, the then State Engineer, began the work which has given rise to the present enquiry, was to strengthen and improve what already existed.

After reading the report of Mr. Macgregor and from information received from my own subordinates, I went to the bund expecting to find that the extension so far south of the original bund had driven the Bandoli out of the course marked on Mr. Channing's map and caused it to flow further east before rejoining its old course below Bijwa, thereby injuriously affecting the rights of Firozpur. I do not, however, think that this is the case. As far as I could judge, without seeing the stream actually in flood, its present course is much the same as that shown by Mr. Channing. To clear up the point the Alwar authorities have kindly consented to have a survey of the present channel made, and I am in correspondence with them on one or two minor points connected with the extension of the bund. The result of these enquiries will, if really important, be reported separately, but I do not anticipate that I shall have anything to add to the opinion which I have just expressed. The stream is being very carefully watched, and if it comes down in flood during the present rainy season, it should be possible to arrive at a definite conclusion. There can be no doubt that owing to the strengthening of the Atrn Bund and to the recent diversion of the [illegible] flooding in Firozpur. In the past a large part of the [illegible] Firozpur Tahsil must have escaped down the old channel east to Naugaon and thence along the new channel to Gurgaon. The object of the extension of the bund was to prevent this and it appears [illegible] it still does with less regularity) [illegible] full level of the [illegible]

rain falls the Firozpur Tahsil will receive a fair amount of flooding, and more than this cannot be expected. The present rains have up to the time of writing been excellent, but they have fallen in short showers, and so far three inches is the most that has fallen at one time in the Landoha catchment area Nothing less than 5 or 6 inches is sufficient to bring the Landoha floods into the Firozpur valley.

Since last settlement there has been correspondence with Alwar about the obstruction of a small stream called the Thek Nala, which eventually flows into Gurgaon A satisfactory arrangement was come to which is at present properly maintained Its future maintenance should be watched together with the arrangements sanctioned in connection with the Landoha

After it reaches the Firozpur Tahsil the Landoha is joined by a number of smaller streams

The largest of these—"the Tirbaini"—rises in Bhartpur territory, flows through Alwar and thence into the Firozpur Tahsil where it joins the Landoha at Doha a few miles from the southern boundary of the tahsil The other streams are small hill torrents which flow from the hills on each side of the valley The most important are on the west, the Bhond, the Jhir which rises just above the headquarters town of the tahsil and gives the town its name of Firozpur Jhirka, and the Balauj on the east, the Ghata and the Darur are the chief streams All these torrents, except the Balauj, flow down into the centre of the valley and eventually join the Landoha, swelling its floods, but they also bring down sand from the inferior bhur lands lying under the hill sides and do a serious amount of damage en route The steps taken to dam or divert the most destructive of these streams will be described in the paragraph on bunds

The slope of the valley is from south to north and the accumulated water of the Landoha and of the local hill torrents drained formerly into a deep depression called the Kotla Jhil which is situated on the north-west boundary of the tahsil, lying partly in Firozpur and partly in the adjoining tahsil of Nuh. In years of heavy rainfall this basin which received also the drainage of the whole Nuh and part of the Gurgaon Tahsils was submerged for long periods, and early in the history of the British administration of the district steps were taken to protect and drain it The protective works and their result will be described in the paragraph on bunds

(b) The Eastern Uplands

Under the eastern side of the central range of hills is a strip of inferior sandy soil similar to that on the west. It is much cut up by ravines and the Darur, which flows east as well as west of the central range, does considerable damage This belt of sand ends in a depression or drainage channel which enters from the Nuh Tahsil at Shakhrawa and carries off the drainage from the hills (and in years of exceptionally heavy rainfall from the Nuh Tahsil) past Lohinga Kalan into the Bhartpur State

Beyond this depression is a high-lying plain of good, firm loam which is a continuation of the great plain of loam characterising the Bangar circles of the Palwal and Nuh Tahsils Here and there it is broken up by detached hills, but in the main it is level, and well adapted to canal irrigation which was introduced in 1875 from the Agra Canal

Bunds and Drainage Canals
(a) Landoha Bunds

3 With so many hills and hill streams inside (and outside but influencing) the tahsil it is obvious that the control of their drainage water is of considerable importance, and a number of bunds have been constructed with this object. I will first describe the scheme of bunds which affect the distribution of the Landoha floods after they reach this tahsil These are not District Board bunds, having been constructed by or at the expense of the zamindars, and their sole object is to utilise to the best advantage the Landoha floods The three most important are Kanmaida, Madapur and Nagli, which are mentioned in section 303 of the Gurgaon Settlement Report, and are notified under Schedule II of Act III of 1905 (Punjab Minor Canals Act)

Kanmaida —This bund is situated close to the eastern boundary of the town of Firozpur Jhirka it holds up the floods and forces them to spread over the lands of Kanmaida and Bilakpur before resuming their normal course.

Madapur and Nagli.—These are important bunds as their object is to divide the floods at Nagli and send half the water in a north-easterly direction, thereby flooding the land of 17 villages which but for the action of these bunds would receive no flooding at all. Mr. Channing's advice at the end of paragraph 303 has not been carried out. The bunds have not been carefully maintained and inspected, all are breached, and in 1899 it was discovered that the Tahsildar did not know of their existence. The Madapur and Nagli Bunds broke in 1896-97, but as the Landoha did not come down in flood again until 1904, not much harm has been done. I have applied separately to be permitted to take action under section 52 of the Minor Canals Act in respect of these bunds. If their repair is promptly undertaken it will be possible to judge of the result before the end of settlement.

The above three bunds are the only bunds on the Landoha mentioned by Mr. Channing, but a number of others exist, which were, presumably, not considered of sufficient importance to mention. Most of them were in existence at last settlement, and are mentioned in the village administration papers: they are generally low embankments of earth which break when heavy floods come. As these village bunds lead to constant disputes and as it is desirable that the Collector should adjudicate on these disputes and prevent fresh ones from arising, I have proposed separately that Government should take action under section 4? of the Minor Canals Act, and I do not propose to deal further with these bunds here.

The remaining bunds are all under the control of the District Board and are notified under Schedule I of Act III of 1905. They may be divided into two classes—A, bunds which form part of a general district drainage scheme; B, isolated bunds designed to check damage from hill torrents.

[illegible]

A. *Kotla Bund*.—This important bund takes off from the hills near the source of the Balauj and consists of a canal on the upstream and an embankment on the downstream side. After following a north-westerly direction for 12 miles it joins the Chandani Drain in the Nuh Tahsil [illegible]. It was originally constructed by [illegible] (afterwards Sir Henry Durand), and its object was [illegible] to divert the floods of the Landoha, Balauj and other [illegible] streams from the Kotla basin. This object [illegible] 1865-66 when the embankment was [illegible] Drain. Since then the flood water of the [illegible] valley has been completely cut off from access to the Kotla Jhil, [illegible] into the Nuh Tahsil [illegible] irrigation [illegible] the [illegible] [illegible] [illegible] the [illegible] [illegible] from the Landoha [illegible] [illegible] that the [illegible] [illegible] irrigation [illegible] permanently [illegible]:—

(a) Protection of the Kotla [illegible].

(b) [illegible]

(c) [illegible]

[illegible]:—

(1) [illegible]

(2) [illegible]

is serious Mr Machonochie (*vide* paragraph 7 of his printed note on this bund) recognised this defect and to remedy it had a sluice constructed at Hasanpur to allow the flood water to pass inside the bund, but the volume of water collected by the bund has been too small of recent years to permit of this remedy being effective.

On the whole the Kotla Bund is a valuable work, and I do not think that any idea of abandoning it can be entertained It is true that owing to the network of bunds constructed in the Nuh Tahsil and to the recent dry seasons the Kotla Jhil instead of being submerged has lately suffered from a lack of moisture, but this is an abnormal state of things, and in years of good rainfall the Jhil will probably still require the protection which this bund affords

Mau —This is a small bund inside the Kotla Bund which was constructed by Mr Machonochie in 1890 to hold up for the benefit of Mau village any water turned inside the Kotla Bund through the Hasanpur sluice (*vide* supra) and to prevent it pouring direct into the Jhil As Mr Halifax has recorded in his printed note, this bund worked well until 1897, but since then no water has passed through the Hasanpur sluice For reasons which I have already recorded I do not think that in future flood water will ever reach this bund, but it had better be retained by the District Board for the present until the effect of a return of normal seasons has been ascertained

Lohinga Valley Canal and Shakrawa and Shah Choka Bunds

The drainage of the Firozpur valley and of the Nuh Tahsil, diverted from the Kotla Jhil, collects at Sangel and Ujina in the Nuh Tahsil The only escape for this water is into the Firozpur Tahsil down the depression between Shakrawa and Lohinga Kalan mentioned in paragraph 2 A shallow canal has been in existence for many years which facilitates the passage of the water, and in years of exceptionally heavy rainfall a large volume of water passes down it Mr Channing describes, in paragraph 9 of the Assessment Report of the Firozpur Tahsil, the arrangements which were in force at last settlement and notes that the overflow from the Nuh Tahsil is of very rare occurrence At last settlement the canal was in charge of the Canal Department, and a water-rate of annas 4 per pacca bigha was collected on all flooded land but the Canal Department abandoned charge of the work soon after last settlement The water after flowing down the Lohinga valley eventually passed off into the Bhartpur State, but much of it was left behind in the pools and hollows round Lohinga To drain these pools and to better utilise the supply of water two bunds were erected by Mr Machonochie across the canal at Shakrawa and Shah Choka in 1887 and 1888, respectively. They were formed by raising the level of two District Board roads which cross the canal at these points and they thus served a double purpose, raising above flood level roads which had previously been impassable for months in the rainy season and causing the flood-water to spread over a much larger area than was formerly irrigated Each bund is supplied with a sluice, which is opened as soon the water collects, and allows it to pass on down the canal Since the bunds were constructed there has, I believe, only twice been an overflow, and no water has come down since 1897 As it is improbable that the Landoha floods will ever again reach the Nuh Tahsil, and as the surplus water of the Nuh Tahsil has been decreased by the network of bunds constructed there since 1885 an overflow from that tahsil will probably be an even rarer occurrence than before, and it would hardly be worthwhile to maintain these bunds as irrigation works, but as they are useful as roads they should be maintained

B The above are the only District Board bunds in this tahsil which form part of the district drainage scheme

The remainder are isolated bunds constructed to control the destructive action of hill torrents

Ghata Shamsabad Bund —The stream, which issues from the hills at Ghata Shamsabad and has a fairly large catchment area, pours sand over the lands of Kanmaida, Hirwari, Madapur, Alhipur and Tigra The damage is very serious and to check it a masonry bund was constructed by Mr Machonochie in 1890 at the point where the stream leaves the

hills, but the force of the stream at this point is tremendous, and the bund was breached in 1903-04 and has not since been repaired. The bunding of this stream is a most necessary work and should be undertaken as soon as possible. A bund would probably be more effective a little lower down stream than the spot previously selected.

Rawa Bund.—The Darur stream mentioned in paragraph 2 rises a few miles north of Ghata Shamsabad. The branch which flows west of the central range was formerly very destructive, and caused great damage to Ranials, Raniah, Dughri, Hamrapur, and one or two other villages. On account of the damage reductions of land revenue were necessary at last settlement and at the revision. An embankment was devised by Mr Maconochie at Rawa where the water issues from the hills, and was completed in 1892. The work seems impregnable and has never been breached, with the result that the position of the villages formerly damaged has greatly improved, and it has been possible to re-impose most of the revenue remitted. The Rawa Bund is a most useful work and should be carefully maintained. Like the Ghata Bund it is purely protective and there is no [illegible] irrigation from it. Its value lies in the improvement which it has effected in the soil of the estates which it benefits.

Dangoeha Bund.—This bund is on the branch of the Darur which flows east of the central range of hills towards the Lohinga valley. The site is a naturally good one, as the bund completely blocks the path of the stream which, at the point where the bund is constructed, passes between two spurs. The bund benefits the village of Dangoeha, and helps to drain the Lohinga valley, but it was breached in 1896-97 and has not since been repaired. The Darur does a great deal of damage before it reaches Dangoeha, and a dam nearer the source would be more beneficial, if it could be successfully constructed. I do not think the existing bund ought to be repaired, unless it will be directly profitable, as it is essentially a "promotive" and not a "protective" work. If constructed nearer the source of the Darur, it would be "protective."

Hitherto a fluctuating water-advantage rate (abiana) has been levied on all land flooded or recorded by the patwaris as flooded from these bunds, and the rates formerly levied and now sanctioned under No. [illegible], dated 10th March, 1905, from the Chief Secretary to Government, Punjab, to the Senior Secretary to Financial Commissioner, Punjab, are as follows:—

1	2	3	
Land	Former rate per acre	New rate	
		[illegible]	[illegible]
	Rs. a. p.	Rs. a. p.	Rs. a. p.
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

recorded as irrigated, and the abiana levied on the remaining five bunds since 1891-92 —

1	2		3		4		5				6			
Year	Kotla		Mau		Shakrawa		Shah Chokra				Dangoocha			
	Area	Demand.	Area	Demand	Area	Demand	Area	Demand			Area	Demand		
	Acres	Rs	Acres	Rs	Acres	Rs	Acres	Rs	a	p	Acres	Rs.	a	p
1891-92		3,436			..									
1892-93	862	539	29	24	.						28	44	11	6
1893 94	8,723	5,499	139	112	923	739	3,237	2,753	0	0	118	188	14	6
1894-95	8,716	5,226	162	124	1,017	772	3,524	2,753	0	0	94	144	0	0
1895 96	6,920	4,102	302	230	892	688	3,455	2,593	0	0	68	103	0	0
1896-97	664	415	33	27	296	237	1,077	961	14	9	50	80	0	0
1897-98	81	17												
1898-99	396	82	...											
1899 00	165	34	.											
1900-01	3,029	631	.											
1901-02	361	75	.											
1902 03	3,755	782	..					.						
1903-04		.	.											
1904-05	976	187						.						
1905 06	1,004	192		.				..						
1906 07	186	36							.					

* Not available

The above statement shews that since 1897 there has been no flooding except on the Kotla Bund and even on that bund the flooded area has largely decreased This is due partly to the dry seasons, but partly, as I have already pointed out, to the fact that the Landoha floods never now reach the north of the Firozpur valley, and so much of the decrease as is due to the latter cause is likely to be permanent. The present rates of abiana and the method of assessing irrigation from bunds will be discussed in the chapter on assessment

Assessment Circle

4 At last settlement Mr Channing constituted 5 Assessment circles. The highlying loam plain to the east formed one circle called Punahana. The belts of bhur on both sides of the central range and east of the western range formed a second circle called Bhuder, while three circles were formed out of the valley proper The southern portion of the valley which was flooded by the Landoha in years of ordinary rainfall was formed into a separate circle under the name of Landoha The central portion which was not reached by the Landoha except in years of exceptionally heavy rainfall, but which benefited by drainage water from the land to the south and from the hills on either side was Mr Channing's Mandikhera circle, while the lowlying area in the north of the tahsil, characterised by the presence of a hard black clay soil and by the saltness of the subsoil water formed a third circle called Chiknot As already noted 15 villages were transferred from the Nuh Tahsil at the end of last settlement

The preliminary report on Assessment Circles was submitted by Mr. Hamilton, and his proposals were sanctioned in No. 3163, dated 6th September 1904, from the Settlement Commissioner

The former five circles were reduced to four The Punahana circle was retained under the name of Bangar and now includes also 14 out of the 15 villages transferred from Nuh The characteristic of this circle is the prevalence of the hard dry loam which resembles but is inferior to the loam of the Palwal Tahsil It is capable of producing excellent crops when irrigated or when moistened by abundant rain, but it requires more rain than it usually receives Sixteen per cent of the cultivated area of this circle is now canal irrigated and further extensions are possible. This is fortunate as well irrigation is very inferior, the wells being generally salt and being only used in dry seasons, as

the salt water if applied regularly to the hard soil, which in the case of the well lands is often clay, would cause it to seriously deteriorate.

The Bhuder Circle was maintained under the same name.

The characteristic feature of this circle is the inferior sandy soil, which near the hills is hardly worth cultivating, but improves further from the hills and often ends in good low-lying loam or clay. The inferiority of the *barani* soil and the comparative absence of natural flooding makes well-irrigation compulsory, and the wells are regularly used. The water is almost invariably sweet, though those wells which are in close proximity to the hills are generally rather deep.

The three former circles of the valley were combined into two on the basis of the quality of the well water. In the former Landoha Circle the well-water is generally sweet, the wells are regularly used and the irrigation is the best in the tahsil. In the old Mandikhera Circle there is less flooding from the Landoha, and the wells are consequently salt, though the *barani* soil is as good as, if not better, than in the Landoha Circle, while in the Chiknot Circle the subsoil water is so salt that hardly any irrigation is possible at all. The Mandikhera and Chiknot Circles were, therefore, combined into one circle under the name of Dabar Khari, while the Landoha Circle was kept as a separate circle and called Dabar Mitha.

I regret to say that after carefully considering the question, I have been unable to maintain the Dabar Khari Circle in the form proposed by Mr. Hamilton. The clubbing together of the old Mandikhera and Chiknot Circles is from the point of view of Assessment statistics and future revenue management unworkable. It is true that the water in both is salt and that the predominant soil is chiknot, which were Mr. Hamilton's reasons for combining Mr. Channing's two northern circles and keeping them separate from the Landoha Circle, but in the old Mandikhera Circle the soil though chiknot is the best in the district, while in the Chiknot Circle it is almost the worst.

I quote from section 61, paragraph 7 of Mr. Wilson's Revision Report the following remarks:—

"It is true that the original Landoha floods do not often reach further north than Sakras, but the Landoha supplies only a part of the moisture which benefits the Mandikhera villages. Even should none of the Landoha floods reach so far, the rainfall of the whole Firozpur Valley, an area of [illegible] square miles, must (so much of it as does not sink into the ground) flow over Chak Mandikhera on its way to the low country about [illegible] and Bighera; and as the greater part of Chak Mandikhera [illegible], the soil even when not directly flooded seems to be kept moist by percolation from the higher parts of the valley and seldom to suffer from drought, so that even in these last few years there has been seldom failure in getting a crop. Much of the land entered as barani is a good, most valuable soil."

This is an excellent description of the [illegible] Mandikhera Circle. [illegible]

Dahar Khari Circle. I regret that this change in the sanctioned circles has not been previously reported for orders, but it was only recently decided on, and I have not delayed this report on account of the change I think my proposals will be found to be justified by the assessment statistics—specially Statement, X and XV, and for the purposes of future revenue management I consider that they are absolutely necessary

Soils.

5 The classes of soil recorded at last settlement were as follows —

Chahi	,	Land irrigated from wells
Dahri	..	Land which received the drainage from the hills or higher-lying lands
Chiknot	..	Hard clay soil
Narmot		Hard loam soil
Magda	.	Light loam soil
Bhur	,	Sandy soil

There were, of course, in addition the usual classes of uncultivated lands.

The classification of soils sanctioned for this settlement is as follows .—

(1) *Chahi* —All land regularly irrigated from a well, whether the well is constructed with masonry or not, and whether it is worked by bullocks or by lift (*dhenkli*). Land will be regarded as regularly irrigated if it has received water in two different years in the period 1898-99 to 1902-03, provided the means of irrigation are still in existence

(2) *Nahri* —All land regularly irrigated from the Agra Canal Land will be regarded as regularly irrigated if it has received canal water in any two years from 1898-99 to 1902-03, or is irrigated at the time of measurement

(3) *Chahi-Nahri* —All land which is regularly irrigated both from the canal and from a well, whether the canal and well are used in the same harvest or in different harvests All land which has been irrigated from the canal in two years out of the five years 1898-99 to 1902-03, and has also been irrigated from a well in 2 years during the same period will be regarded as Chahi-Nahri

(4) *Abi* —All land which is irrigated from tanks, *jhils*, springs or from river branches or by District Board bunds Both the lands flooded by water held up within the bund and also the lands irrigated by cuts from the bund will be included

(5) *Dahri* —All land which in years of normal rainfall receives the drainage from the hills or from higher-lying lands

(6) *Chiknot* —Hard clay unirrigated soil which does not usually receive flood water

(7) *Narmot* —Fairly hard loam soil which receives no irrigation

(8) *Magda* —Light and somewhat sandy unirrigated loam soil.

(9) *Bhur* —Sandy unirrigated soil

The uncultivated lands are recorded as laid down in the Land Revenue Rules

Comparing the classification of last settlement and now, it will be seen that the subdivision of *chahi* by soils has been abolished, as where the land receives irrigation the nature of the soil is of minor importance, while the definition of *chahi* has been altered so as to conform with the prescribed rules

The classes of *nahri*, *chahi-nahri* and of the *barani* soils (chiknot, narmot, *magda* and *bhur*) have been discussed in the Palwal Assessment Report, and the same remarks apply It may be noted that the argument for reducing the classes of *barani* soil applies with even greater force in this tahsil, as cash-rents will show

Abi.—In this tahsil *abi* is land which is irrigated by the District Board bunds mentioned in paragraph 3. Owing to the abnormal character of the seasons the work of classification has been extremely difficult. The statement in paragraph 3 shows that there has been no flooding from any bund since 1897, except the Kotla Bund, and this is the only bund which has a recorded *abi* area. It was found after many attempts impracticable to adopt the area irrigated in any particular year or years, and the classification was based on a careful examination of the land, and to a certain extent on the admissions of the zamindars. It may, I think, be accepted as correctly representing the area which in a normal series of years will be fairly regularly flooded.

Dahri.—As already explained, the classification of *dahri* is one of the problems of the assessment of this tahsil. The area flooded by hill-torrents as distinct from the Landoha has been fixed by the Tahsildar and Naib-Tahsildars after careful observations on the spot. As regards flooding from the Landoha, I have ordered all *barani* land which was flooded, both in 1904 and 1906, to be recorded as *dahri*. The area actually flooded in these two years was carefully measured, and there is no doubt as to the correctness of the recorded area.

Owing to the almost total cessation of flooding after 1897, and to the possible connection therewith of the alterations to the Atru Band, Mr. Hamilton, in 1904, ordered all lands flooded by the Landoha to be recorded as *barani*, but I do not think that such a pessimistic attitude is justified, and it does not appear oversanguine to anticipate that the moderate area now classed as *dahri* will be flooded whenever really heavy rain falls. It must be borne in mind that a fairly large part of this area is flooded by local drainage independently of the Landoha.

Rainfall.

6. Statement I gives details of the rainfall for the past 21 years. There are two gauges in the tahsil—one at Punahana and one at Firozpur Jhirka. Both give exactly the same average, and the rainfall of the whole tahsil may, therefore, be taken to be uniform. The year has been divided into two periods—the months of monsoon rainfall and the rest of the year. The following table compares the former and the present figures, and the figures of the adjoining tracts are included for purposes of comparison :—

	Inches
Final Settlement Report (section 7)	31·1
Revision Report (section 2)	2[illegible]·3
Statement I — Punahana [illegible]	2[illegible]·6
Statement I — Gauge Average	[illegible]
Tahsil Ramgarh, Alwar State (1876-77 to 18[illegible])	[illegible]
Tahsil Pahari, Bharatpur State (18[illegible] to 1[illegible])	[illegible]
Tahsil Kaman, Bharatpur State	[illegible]

I can find no mention of the rainfall in Mr. [illegible] Report.

The average given in the Final Settlement Report [illegible] rainfall [illegible] years preceding 18[illegible] [illegible] (Revision Report, paragraph [illegible]) [illegible] 21 [illegible] 1882-[illegible] [illegible]

[illegible]

CHAPTER II —GENERAL STATISTICS

Area.

7. The following table compares the total areas of the present and two preceding settlements —

1	2	3	4	5	6
		Percentage on total area of			
	Total area in acres	Uncultur-able	*Culturable*		Remarks
			Uncultivated	Cultivated	
First regular settlement	1,92,924	17	31	52	The difference between the areas of the 1st and 2nd regular settlements is due to the transfer at the end of the second settlement of 15 villages from the Nuh Tahsil
2nd do ...	2,02,644	16	2	82	
1905 06 ...	2,01,966	16	2	82	

The figures of the first regular settlement are taken from Form A of Mr Channings' Assessment Report of the tahsil, and the figures in column 4 include fallow There was a large increase of cultivation between the 1st and 2nd settlements, but cultivation had reached its utmost limit at last settlement, and very little change has taken place during the last thirty years

But for a considerable decrease of cultivation in the Kotla Basin there would have been no change. As it is there has been a small decrease, as the statement which will shortly be put in shows.

In the *Mewat* the pressure of population on the soil is exceptionally severe, and it is impossible for the people to maintain even a moderate area of culturable waste for grazing purposes The percentage of culturable waste is largest in the Bangar and Chiknot Circles, because in the former the hill area is smallest and in the latter a large part of the Kotla Basin is left uncultivated In the Bhuder, Dahar Mitha and Dahar Khari Circles it amounts to a very small percentage, but the first two of these circles have a moderately large hill area which affords fairly good grazing, and they are therefore not so badly off in this respect as they appear to be

The areas of each class of cultivated and uncultivated soil at last settlement, and now, are compared in the following statement.—

1	2	3	4	5	6	7	8	9	10	11	12
	PERCENTAGE ON										
	Total area of			Cultivated area of							
		Culturable									
[illegible]	[illegible]	[illegible]	Cultivated	Chahi	Nahri	Abi	Dahri	Chiknot	Narmot	Maqda	Bhor
[illegible]	[illegible]	[illegible]	[illegible]	60	..		1·0	8·0	64·0	14·0	7·0
[illegible]	[illegible]	[illegible]	[illegible]	8·0	16·0	1·0	1·0	5·0	18·0	12·0	6·0
[illegible]	[illegible]	1·2	[illegible]	17·0	.	.	6·0	2·0	7·0	15·0	[illegible]
[illegible]	[illegible]	1·0	[illegible]	12·0	.	1·0	3·0	3·0	7·0	16·0	58·0
[illegible]	[illegible]	1·0	77·0	12·5	...	.	31·0	2·0	26·0	11·0	15·0
[illegible]	[illegible]	2·0	[illegible]	18·0	.	...	12·0	3·0	29·0	22·0	16·0
[illegible]	[illegible]	1·0	[illegible]	6·0	.	..	29·0	11·0	25·0	16·0	10·0
[illegible]	[illegible]	1·0	[illegible]	5·0	..	1·0	9·0	21·0	31·0	15·0	10·0
[illegible]	[illegible]	[illegible]	[illegible]	1·0	...	.	17·0	25·0	22·0	2·0	3·0
[illegible]	[illegible]	[illegible]	[illegible]		.	1·0	27·0	41·0	21·0	2·0	3·0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	..	–	14·0	7·0	37·0	13·0	21·0
[illegible]	[illegible]	2·0	[illegible]	16·0	7·0	2·0	6·0	9·0	32·0	11·0	29·0

The present figures are taken from the measurement papers in the case of finished villages, and from the *jamabandis* of 1902-03 in the case of unfinished villages The classification of soils is very easy in this tahsil, and was very carefully made at last settlement No correction has been necessary, and the changes in the distribution of the various soils are due to the different method of classifying *chahi*, to the introduction of the new classes of *nahri* and *abi* and to the all-round decrease of the *dahri* or flooded area The recorded *abi* and *dahri* areas are by no means final, as no reliance can be placed on the classification of these soils in the *jamabandis*, and even in the case of finished villages many alterations were made when the villages were inspected for assessment. The correct areas and percentages in each circle of *abi* and *dahri*, which have now been classified according to the principles stated in paragraph 5, are as follows —

1	2		3	
Circle	Area in acres		Percentage on cultivated area.	
	Abi	*Dahri*	*Abi*	*Dahri*
Bangar		754	..	1
Bhader	82	943		2
Dahar Mitha		4,364		18
Dahar Khari	614	875	3	4
Chiknot	361	152	3	1
Total Tahsil	1,057	7,088	1	4

The dahri area in the Chiknot Circle does not include 842 acres flooded by the water which collects in the Kotla Jhil, and which are under fluctuating assessment

The chief features of the statistics of cultivation are—(*a*) the great improvement in the Bangar Circle, effected by the introduction of canal irrigation, (*b*) the serious decrease of flooding in the Dahar and Chiknot circles, due to causes which I have already explained. The enormous decrease in the Chiknot Circle is due partly to an overestimate of the *dahri* area at settlement, partly to the action of the Kotla Bund in placing out of the reach of floods the villages which lie inside it, but chiefly to the breaching of the Madapur and Nagli Bunds, and to the fact that the Landoha floods do not now reach the north of the valley

Irrigation.
(*a*) Wells

8 Well-irrigation is not of much importance in this tahsil, the area classed as *chahi* amounting to only 10 per cent of the cultivated area In the Bangar and Dahar Khari Circles, where the soil is hard and the water generally salt, wells, if possible at all, are used only when the rainfall is insufficient to mature a *barani* crop In normal years the difference between the yield of an irrigated and unirrigated crop on wells of this class is not sufficiently large to compensate for the extra expense of irrigation, and the lazy and poverty-stricken Meo naturally avoids the labour and expense of working his well as far as possible In these two circles irrigation is inferior and is purely protective In the Bhader Circle the wells are sweet, and in villages where the *barani* soil is too weak to permit of *rabi* sowings they are regularly used. In the Dahar Mitha Circle also there is a good deal of light soil, and as the water is sweet and very near, and as most of the villages adjoin the market town of Firozpur Jhirka, well irrigation is easy and profitable In consequence the wells are regularly used, except in years when the *chahi* lands happen to be flooded Statement XV illustrates the above remarks, in the Bangar and Dahar Khari Circles the *chahi* cash-rent is little higher than that of good *barani*, while in the other two circles there is a considerable difference

In the Chiknot Circle the sub soil water is so salt that well irrigation may be said to be non-existent

A feature of the well irrigation of the Dahar Khari Circle is the enormous expansion by means of earthen wells and *dhenklis* which takes place in dry years.

In the low-lying lands of the valley water is so near that temporary wells can be sunk at a nominal cost They fall in with the first flood or heavy

fall of rain, but can be re-constructed whenever necessary, and are freely resorted to in years of drought. This is a considerable source of strength to these circles, and it does not come out in the irrigation data given in Statement III, as the earthen wells and *dhenklis* shown in that statement are those which happened to be in use at the time of measurement but it is brought out by a comparison of the irrigation figures of Statement III with the area of average irrigation from wells for the years 1900-01 to 1904-05 given in Statement II. The areas are compared below—

Circle	Area in Statement II	Area in Statement III
	Acres	Acres
Barjar	[illegible]	[illegible]
Bhuder	[illegible]	[illegible]
Dabar Mahi	[illegible]	[illegible]
Dabar Khari	[illegible]	[illegible]
Chikot	[illegible]	[illegible]

Owing to three out of the five *rabis* between 1900-01 and 1904-05 being exceptionally poor, there was a large expansion of temporary irrigation in the Dabar Khari and Chikot Circles. A certain number of *dhenklis* are regularly worked by *mali* and *dhangar* tenants for the cultivation of valuable spring crops, but Mess only use temporary wells in times of drought.

Masonry wells are generally mortared, but close to the hills wells of loose packed stone (*kara*) are common. Mr. Douglas, in the Nuh Tahsil, found that a masonry well costs Rs. 20 per cubit to construct. In the Tahsil the cost would be exactly the same, and to obtain the cost of an average well in each circle we have only to calculate from Statement III the total depth of a well in cubits and multiply by Rs. 20.

The resulting cost of a masonry well in each circle is approximately as follows—

1	2
Assessment Circle	Cost of a [illegible]
	Rs.
Barjar	[illegible]
Bhuder	[illegible]
Dabar Mahi	[illegible]
Dabar Khari	[illegible]
Chikot	[illegible]

[illegible]

[illegible]

The wells are all worked on the *charas* and *lao* system, and two yoke of oxen are invariably used For the cost of the well-gear and of the bullocks I would refer to my Rewari Report, simply noting the fact here that the cost of these accessories has increased enormously in recent years

Detailed statistics of wells and irrigation are given in Statement III In a tahsil like this, where the wells are not regularly used, a comparison of the figures of last settlement and now is not of much use The settlement figures are only for one year, which happened to be a year of exceptionally good rainfall, and consequently the number of wells in use and the area irrigated are much below average To obtain a more reliable estimate, Mr Wilson took the average of the year of settlement, of 1881-82 and of 1882-83 The irrigated area of settlement compares with this average area as follows —

1	2	3
Circle	Settlement area	Average of the three years
Bangar	885	1,556
Bhuder	2,200	2,262
Dahar Mitha	1,528	1,164
Dahar Khari Chiknot	765	653
Total Tahsil	5,378	5,635

The large decrease in the Dahar Circles was no doubt due to lack of resources, as they suffered severely in the bad seasons between 1878—1883. But for the effect of the famine Mr. Wilson's figures would probably have shown an increase of irrigation in these circles as in the other two The present figures are the average of the 8 years 1898-99 to 1905-06, but as these years contain an unduly large proportion of bad *sáls*, the number of wells in use and the area irrigated is probably much above average It is obvious from the above remarks that it is extremely difficult to make any reliabl comparison of irrigation at settlement and now, and the figures in Statement I are of very little use There appears to have been a considerable increase all circles except Chiknot, and this supposition is borne out by the large incre in the number of wells, at the same time, for reasons already given, the incre is probably not as large as it appears to be

The average area irrigated per *lao* is very small. The area irrigab and actually irrigated, in a year when a well is used averages 5 acres, but i little less in the Bhuder Circle, where the wells are somewhat deep and t soil sandy, and a little more in the Dahar Mitha Circle, where the lift is eas As the wells are not regularly used the average area irrigated is less than the area irrigable and irrigated in any one year

The information required by correction slip No 3 to Settlement Commissioner's Circular No 21 is as follows —

1	2	2	4
Assessment Circle	Number of masonry wells in use at the beginning of the expiring settlement which have fallen out of use during its term	Number of new masonry wells sunk during the term of expiring settlement and still in use	Number of masonry wells which were not in use at the beginning of the expiring settlement but were repaired during its term and are still in use
Bangar	44	102	69
Bhuder	45	122	65
Dahar Mitha	33	63	20
Dahar Khari	13	80	37
Chiknot	4	2	6
Total	139	369	197

(b) [illegible]

Most of the remarks in paragraph 5 (b) of the Palwal Assessment Report apply to canal irrigation in this tahsil also, and I need not repeat them here. Irrigation was introduced in 1875 and had been extended to five villages in the year in which Mr. Channing wrote his Assessment Report, though there was none in the year of measurement (*vide* Assessment Report, paragraph 8).

The following statement shows the areas irrigated in each year since 1881-82. The figures for the first two years are taken from the Revision Report, paragraph 9, and for the remaining years from the tahsil note-book:—

1	2	3	4
Year	Area irrigated by Canal		
	Kharif	Rabi	Total
1881-82	..		2,2[illegible]7
1882-83	..		[illegible]41[illegible]
1883-84	2,163	[illegible]61[illegible]	[illegible]
1884-85	2,[illegible]6	2,17[illegible]	4,[illegible]
1885-86	1,92[illegible]	[illegible]	[illegible]71[illegible]
1886-87	1,315	2,[illegible]	[illegible]
1887-88	1,[illegible]	[illegible]	[illegible]
1888-89	1,6[illegible]	2,1[illegible]	[illegible]
1889-90	[illegible]	[illegible]	[illegible]
1890-91	1,[illegible]7	2,[illegible]	[illegible]
1891-92	2,[illegible]	[illegible]	[illegible]
1892-93	1,272	1,[illegible]	2,72[illegible]
1893-94	1,[illegible]	1,[illegible]	[illegible]
1894-95	[illegible]	1,11[illegible]	[illegible]
1895-96	1,[illegible]	[illegible]	[illegible]
1896-97	2,[illegible]	[illegible]	[illegible]
1897-98	[illegible]	[illegible]	[illegible]
1898-99	2,[illegible]	[illegible]	[illegible]
1899-1900	4,[illegible]	[illegible]	11,[illegible]
1900-01	[illegible]	[illegible]	[illegible]
1901-02	[illegible]	[illegible]	[illegible]
1902-03	4,22[illegible]	[illegible]	[illegible]
1903-04	[illegible]	[illegible]	[illegible]
1904-05	[illegible]	4[illegible]1	[illegible]

The above statement shows that there has been a large increase of irrigation since 1896-97 [illegible] to the dry seasons. The [illegible] does not [illegible] of canal irrigation as does the Palwal [illegible] [illegible]

[illegible]

Another project which has already been sanctioned and will be completed this year is the Hathin-Bhartpur escape This will also relieve water-logging. It takes off from Paosar in the Nuh Tahsil where the water-logged area on the Hathin Rajbaha commences, and after making a semi-circular sweep through the Firozpur Tahsil ends in Bhartpur territory where it will be joined by the Paosar Drain The removal by means of this escape of all surplus water will considerably benefit the villages below Paosar

As the map shows, it is proposed to make small extensions of irrigation on most of the existing minors, and these will probably be carried out within the next three or four years

The canal dues in force were detailed in the Palwal report

The following table shows the areas irrigated during the five years selected for the produce estimate according to the records of the Canal Department —

1	2	3	4	5	6	7
Year	Area in acres			Occupier's rate	Owner's rate	Total
	Flow	Lift	Total			
				Rs	Rs	Rs
1900 01	7,506	689	8,195	23,671	7,554	31,245
1901-02	9,240	945	10,185	31,262	10,052	41,314
1902 03	8,637	894	9,531	28,887	9,235	38,122
1903 04	9,010	895	9,905	29,964	9,630	39,594
1904-05	6,488	620	7,108	22,605	7,257	29,862
Average	8,176	809	8,985	27,278	8,749	36,027

The canal dues are at the scale in column 2 of the comparative table of rates given in the Palwal report and average Rs 4 per acre on the area recorded by the Canal Department This area is 548 acres or 6½ per cent larger than the matured area in Statement II Canal dues at the present scale average exactly the same as at the old scale

Communications and marts

9 This tahsil has always been the worst in the district as regards communications It contains no metalled road, though one is about to be constructed from the town of Firozpur-Jhirka to the town of Nuh (24 miles), and as a metalled road from Nuh to Palwal (22 miles) is also under construction, the villages situated in the north of the valley will get direct communication by metalled road with the Agra Delhi-Chord Railway at Palwal The villages in the south of the valley are connected by a metalled road with the town of Alwar on the Rajputana-Malwa Railway Formerly the road was in a very bad state of repair, but it has recently been repaired and is now in very good order. If possible the road from Nuh to Firozpur should be extended up to the Alwar border Most of the produce of the Bangar Circle finds its way to Kosi in the Mathra District This important market town is now on the Agra-Delhi-Chord Railway, the opening of which in 1904 has immensely improved the position of this tahsil The town of Hodal, which is on the same Railway, is also within easy reach of the villages of the Bangar Circle A "feeder" road to Hodal or Kosi, if possible from Firozpur-Jhirka, or if this is impracticable, from the eastern side of the central range, would still further improve communications

Within the tahsil itself Firozpur-Jhirka serves as a mart for the produce of the valley, while the produce of the Bangar Circle is disposed of at Punahana, if it is not conveyed direct to Hodal or Kosi Cotton, wheat and oilseeds are the chief articles exported Cotton is, if posssible, conveyed direct by the cultivator to Palwal, Hodal or Kosi, and sold at the ginning mills Wheat and oilseeds are disposed of locally to the bania

Cattle

10 The former and present figures of cattle are given in Statement IV The changes in the number of ploughs and bullocks correspond with the changes in the material condition of the various circles the Bangar and Bhuder Circles have prospered, while the Dahar and Chiknot Circles have deteriorated, and in the

two first circles we find that ploughs and oxen have increased, while in the three last they have decreased. The following statement shows in each circle the area cultivated per pair of bullocks at settlement and now, and the increase and decrease per cent of ploughs and bullocks. I have made a deduction from common for bulls at the rate of one bull for every 50 cows —

1	2	3	4	5
Circle	Area cultivated per pair of bullocks in acres		Increase or decrease per cent of	
	Settlement	Now	Bullocks	Ploughs
Bangar	16	16	[illegible]	+2
Bhuder	17½	16	+9	+15
Dabar Hills	16	18	—12	[illegible]
„ Khas	14	16	—1[illegible]	—17
Chiknot	18	2[illegible]	—[illegible]	—[illegible]

The settlement area may be taken to represent the proper area culturable per plough in each circle, except Chiknot, where the settlement area is too high, and the increase in the present area in the Dabar and Chiknot Circles resulting from the decrease in bullocks and ploughs is very serious. In the Bangar Circle ploughs and bullocks are sufficient, while in the Bhuder Circle they are more than sufficient.

In a tahsil where the area available for grazing is so limited, the number of cattle other than plough cattle is necessarily very small, and only a sufficient number are kept to supply milk and ghi for domestic purposes, and these are nearly all stall-fed. The hills afford grazing for a large number of sheep and goats, but these are not generally kept by agriculturists. [illegible] few cattle are kept, the supply of manure is less than the soil requires, and the tahsil is not nearly so well off in this respect as Pahari [illegible]

11. The following table shows the totals of the general population at different periods: —

1	2	3	4
Year	[illegible]	[illegible]	Remarks
184[illegible]	[illegible]		[illegible]
[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	

[illegible]

Pinangwan and Punahana The resulting incidence per square mile of cultivation in each circle is as follows —

Bangar	517
Bhuder	468
Dahar Mitha	491
„ Khari	467
Chiknot	295
Total Tahsil	478

These would not be very high rates for fertile, well cultivated and well irrigated soil, but they are high for this tahsil with its small proportion of artificial irrigation and for Meo cultivators The improvident Meo has always been notorious for the number of his children (*vide* Section 56 (2) of the Final Settlement Report of Gurgaon) and the population question is a serious one in the Mewat Cultivation had reached its limit 20 years ago, population is already pressing very heavily on the soil, and given normal seasons, it must continue to increase, yet so great is the attachment of the Meo to his native land that no relief can be looked for from emigration.

Tenures and holdings

12. The following table shows the prevailing forms of tenure :—

1	2	3	4	5	6
Assessment Circle	Zamindari		Imperfect pattidari	Imperfect bhaiyachara	Total
	Single landlord	Communal			
Bangar		4	38	61	103
Bhuder		4	7	47	58
Dahar Mitha	1	1	4	25	31
„ Khari			3	31	34
Chiknot			1	17	18
Total	1	9	53	181	244

Statement XI shows that nearly 60 per cent of the cultivated area is cultivated by the owners themselves, and the percentage would be much larger but for the large area transferred to outsiders The owners are almost without exception small peasant proprietors, holding the minimum area necessary for their maintenance

The following statement shows the average area per holding, the average area per owner and the net area per owner free for profit after deducting the area transferred to outsiders and cultivated by tenants free of rent or paying at revenue rates Villages owned by a single owner and land owned by Government have been excluded from the calculation of the area in column 7 —

1	2	3	4	5	6	7
Assessment Circle.	Year	Number of proprietory holdings	Cultivated area	Area per holding	Area per owner	Net area per owner available for profit
			Acres	Acres	Acres	Acres
Bangar ..	Present Settlement	11,048	67,241	6 1	7 2	5 4
Bhuder		5,889	38,688	6 6	8 7	6
Dahar Mitha		4,885	25,490	5 2	9	5 6
„ Khari		7,298	20,908	2 9	5 9	3 9
Chiknot		3,206	11,950	3 7	6 4	4 2
Total		32,326	164,277	5 1	7 5	5 1

The area in column 7 is sufficient in the first three circles, but even in them the distribution is very uneven, and there are many villages where the area per owner free for profit is not more than 2 acres. In the Dahar Khari and Chikrot Circles land is altogether insufficient and the pressure of population on the soil is excessively severe. In these circles there are many villages where the area free for profit is less than 1 acre per owner, and the problem of how to assess such villages is a very difficult one.

It should be noted that in calculating the area in column 7 I have only deducted the area transferred to "others." If I had deducted the whole area transferred the net area per owner would be still smaller, as the area transferred to "others" is little more than one-third of the whole area transferred.

13. Statement V shows the distribution of ownership by tribes. The proprietary body is composed almost without exception of Meos, who are a lazy, thriftless and improvident tribe, though to quote the words of Mr. Channing (Assessment Report, paragraph 16) "how to characterize them as cultivators I hardly know." As a cultivator the Meo is generally what his surroundings make him. In the valley, where the assessment is high and the pressure of population on the soil severe, the cultivation is of a high class and the people are industrious. Similarly in the Palwal Tahsil, where the assessment is severe for Meos, and the standard of cultivation set by the surrounding Jats high, the few Meo villages are noted for their industry and good cultivation. In the Bangar Circle of the tahsil, on the other hand, where the assessment is somewhat light, the cultivation is slovenly and more in accordance with the traditional habits of the tribe.

Tribes of owners and tenants

As Mr. O'Dwyer has pointed out in paragraph 22 of the Assessment Report of Tahsils Kishengarh and Ramgarh. "While the men are lazy the women are energetic and industrious and do most of the field work except the ploughing." Mr. O'Dwyer sums up the character of the Meos as follows:—

"All are alike impulsive, short-sighted, easily led, especially in the wrong direction, litigious, not hospitable for Musalmans, but immoderately extravagant on certain occasions, such as weddings and funerals. They want the stamina of the Jats. Prosperity turns the head of a Meo, adversity makes him lose it, and as they themselves freely admit they are only good while kept well under. Their faculties are however sharper than those of any other tribe except perhaps the Ahirs, and this makes them keen defenders of their own interests and quick to observe and resent any injustice."

To this description I would add as an instance of their improvidence that they are addicted to a practice of "bhulai." They borrow from the money-lender a sum which is to be repaid at harvest time in cotton or grain, the rate at which the produce is to be disposed of being fixed low. Should the [illegible] be unfavourable, as often happens, and the debtor unable to pay [illegible] of produce agreed upon, he is debited with the value of the [illegible] calculated at the market rate, which is probably [illegible] the rate originally agreed upon.

As an instance of the demoralising effect of prosperity on the [illegible] I would instance the canal villages. The extravagance [illegible] [illegible] [illegible] ing to them is a [illegible].

[illegible]

[illegible]

[illegible]

14. [illegible]

[illegible]

mortgage, and the latter gives the annual total of sales, mortgages and redemptions from 1885 to 1905-06 Reliable figures are not available before 1885. The following table compares the state of transfers at last settlement and now The top figure is the percentage of the cultivated area transferred and underneath in brackets the price per acre is shown in even rupees the settlement figures are taken from paragraph 18 of Mr Channing's Assessment Report and Table II appended to the Report I am unable to give details of sales before settlement by circles as Table I is missing The percentage of transfers before settlement is calculated on the total area and of existing transfers on the cultivated area

As the present Dahar Khari and Chiknot Circles do not agree with Mr. Channing's Mandikhera and Chiknot Circles, I have given the total percentage of mortgage in the two former circles —

1	2	3	4	5
	Sales		Mortgages	
	Before Settlement (1857-75)	Since Settlement	At Settlement.	Now
Bangar		1 (Rs 111)	6 (Rs 17)	29 (Rs 49)
Bhuder		5 (Rs 43)	6 (Rs 22)	27 (Rs 42)
Dahar Mitha		14 (Rs 20)	8 (Rs 22)	37 (Rs 37)
„ Khari		5 (Rs 116)	16 (Rs 32)	53 (Rs 58)
Chiknot		2 (Rs 50)		47 (Rs 38)
Total Tahsil	1 (Rs 32)	4 (Rs 38)	8 (Rs 24)	34 (Rs 46)

The area sold is very small The attachment of the Meo to his native soil is extraordinarily strong and he would rather mortgage 100 acres than sell one. The large percentage of sale in the Dahar Mitha Circle is due to the sale among relations of the whole village of Doha (paragraph 12) Excluding the area of this village the percentage is reduced to 3, while the average price is raised to Rs 33 per acre

The area mortgaged is on the other hand very large and is worst in the two Dahar and Chiknot Circles As regards mortgage the condition of this tahsil is bad, but not as bad as it appears to be The extravagant and improvident Meo, though averse to selling thinks nothing of mortgaging his land, especially if he has a little more than the bare minimum required for the maintenance of his family, a bad harvest or a wedding will involve him temporarily in a mortgage, but he expects if the seasons are favourable to be able in a few years to redeem his land, and Statement VII shows that he does so in the second and third periods which were years of prosperity the area redeemed equals the area mortgaged Another satisfactory feature is the large proportion of mortgage to members of an agricultural tribe it amounts to nearly two-thirds of the whole, and most of it is in the hands of co-sharers Extensive mortgage therefore does not necessarily mean anything when the mortgagors are Meos, and in the Bangar and Budher Circles mortgage is not serious In the other circles, however—especially in Dahar Khari and Chiknot—the state of affairs could not very well be worse

In many villages in these circles the area mortgaged is so large that no margin is left for comfort or even for the bare maintenance of the mortgagor Most of the mortgage to "others" took place in the bad years immediately after last settlement, when banias acquired possession of large areas

In the Mewat the Land Alienation Act has proved of immense benefit to the people As Mr Wilson says, their careless habit of contracting debt for marriages, funerals and petty luxuries even in average years formerly placed them

absolutely at the mercy of the money-lender when a year of drought came. When once a Meo has mortgaged his land to a money-lender, he is rarely able to redeem it. He usually cultivates it himself at a rack rent, which can only be paid in favourable seasons, and before the passing of the Land Alienation Act the penalty attached to default of payment was further mortgage.

This state of affairs is now at an end, and the decrease of mortgage in the two Dahar Circles since 1901 is most satisfactory. The following table shows the totals of unsecured debt in each circle:—

1	2	3	4	5
Assessment Circle	Unsecured debt			Total
	Due to co-sharers	Due to other owners	Due to money-lenders	
	Rs	Rs	Rs	Rs
Bangar	27,0[illegible]7	21,[illegible]0	1,[illegible],[illegible]79	2,[illegible]
Border	10,[illegible]	1[illegible],[illegible]2	1,9[illegible],1[illegible]	1,21,2[illegible]
Dahar Mutha	5,[illegible]	1,[illegible]67	[illegible],[illegible]34	[illegible],767
" Khari	10,276	1[illegible],312	6[illegible]	[illegible]
Chikna	[illegible]	6,2[illegible]4	1[illegible]	1,1[illegible]
Total Tahsil	[illegible]	[illegible]	4,7[illegible],114	[illegible]

The amount of unsecured debt varies inversely with the amount of mortgage. In the circles where mortgage is heaviest, unsecured debt is least, which means that there the people cannot borrow without the security of land. Debt is largest in the Bangar Circle, where it is more than three times the land revenue, because there the assessment is lightest and the introduction of canal irrigation has improved credit. For the whole tahsil unsecured debt amounts to twice the land revenue, which is less than in tahsils Rewari or Palwal and indicates the small amount of confidence which the Meo inspires as a debtor.

From the statement at the beginning of this paragraph it would appear that the price of land has nearly doubled, but very little reliance can be placed on such figures. The sale price in column 8 is obviously unreliable, while the mortgage price is [illegible], as the best lands are always mortgaged. The [illegible] of land [illegible] in the Bangar Circle [illegible] and [illegible] in the [illegible] and Dahar Mutha Circles. [illegible] Dahar Khari and Chikna Circles [illegible]

[illegible]

[illegible]

[illegible]

In this statement the barani soil classification is that of last settlement with the modifications introduced by patwaris at crop inspections.

Matured area.

17. Statement X shows the area matured at each harvest in each circle during the last 21 years, and the percentage which the matured area bears to the cultivated area. Periodical averages have been struck which show that in all circles the first two periods were above and the last two below the average. The kharifs are nearly average all through and the deficiency in the last two periods is due entirely to the long series of bad rabis since 1896

In the Bangar Circle owing to the influence of the canal the recorded percentage of matured to cultivated area exceeds 100: but as will be shown later the failed area in this circle has been considerably underestimated and the percentage is not nearly so large as Statement X shows In the Bhuder and Dahar Circles the percentage is also high. In the first named circle the lightness of the soil permits of a crop being matured with very little rain, while the other two circles are secure owing to the moistness and fertility of their soil. The percentage in the Dahar Khari Circle is probably the highest in the tahsil while it is lowest in the insecure Chiknot Circle where the proportion of black chiknot is very large and in the greater part of the circle the soil is dependent entirely on the rainfall. The figures of the last ten years in this circle speak for themselves and constitute the chief justification for the separation of the Chiknot from the Dahar Khari Circle.

Percentages of principal crops grown

18. The following statement shows in percentages the average area of each important crop sown, matured or failed, on 100 acres of each class of land during the years selected for the produce estimate.—

1	2	3	4	5	6	7	8	9	10
Assessment Circle	Harvest	Crop	Chahi	Nahri.	Abi.	Dahri	Barani	Bhur	Total.
BANGAR	Kharif	Jowar				16·00	14 81	1 18	10·38
		Bajra ,,		,,		3·70	34 85	53·22	27·23
		Pulses		,,		·35	1·76	3 01	2·08
		Fodder			,,	·88	10·64	10·44	7·95
		Cotton	·72	25 13	,,	4 39	8 48	2 29	10·06
		Sugarcane		5 87			,,		·93
		Others	62	9 53		1·04	2·83	87	3·57
		Area harvested	1·34	40·53		26·36	74 37	71 01	62 20
		Area failed	·05	1 33		88	14 77	23·27	11 80
		Area sown	1 39	41 86		27·24	89·14	94 28	74 00
	Rabi	Wheat	7 93	8·28	,,	2 46	1·37	·19	2·96
		Barley ,,	29·52	13 69		3 16	7 54	6 10	10·23
		Gojra and goobni	2·25	5 35		5·27	2 26	·27	2 65
		Gram		8 64		6 15	25·38	13 07	19·66
		Oilseeds	1 13	1 47		1·76	2·22	2·00	1 89
		Others ,,	2·16	1 07			20	02	50
		Area harvested	42·09	38 50	,,	18 80	38 97	21 65	37·99
		Area failed	1·88	1·04	,,	4 39	12·28	7 50	9·26
		Area sown ,,	44 67	39·54		23 19	51·25	29 15	47·25
	Total.	Area harvested	44 38	78·03		45 16	113 34	92·66	100·19
		Area failed	1 93	2·37	,,	5·27	27·05	30·77	21·06
		Area sown	46·26	81 40	,,	50·43	140·39	123 43	121 25

1	2	3	4	5	6	7	8	9	10
Assessment Circle	Harvest	Crop	Chahi	Nahri	Abi	Dakhri	Barani	Bhur	Total
BHUDER	Kharif	Jowar		...	..	6 11	8 62	1 25	8 03
		Bajra		.	5 78	9 02	20 43	47 84	35 21
		Pulses	.	...	75	1 22	4 52	7 31	6 81
		Cotton	2 02	...	1 13	3 51	9 20	2 17	4 02
		Fodder	19	.	1 20	5 08	12 28	12 20	11 02
		Others	67	...	35	1 08	2 22	20	1 77
		Area harvested	2 67		6 40	27 27	65 85	74 02	61 56
		Area failed	15	...	3 75	11 77	12 40	27 72	15 22
		Area sown	3 02		17 10	75 68	78 25	25 41	75 84
	Rabi	Wheat	6 15	.	...	5 07	4 71	14	7 85
		Barley	23 63		1 15	6 47	[illegible]	6 25	10 47
		Gojra and gochni	3 07	...	3 27	[illegible]	[illegible]	3 31	4 19
		Gram	...	...	1 51	6 52	11 15	4 25	6 07
		Oilseeds	1 70	...	34	2 10	[illegible]	7 14	6 75
		Others	4 10	...	...	60	1 45	27	23
		Area harvested	45 67	...	7 15	27 25	4 10	[illegible]	[illegible]
		Area failed	4 15	...	4 75	7 53	18 57	1 72	11 74
		Area sown	22 27		11 6	7 41	[illegible]	31 31	41 12
	Total	Area harvested	[illegible]		15 15	27 24	[illegible]	[illegible]	[illegible]
		Area failed	4 77		52	[illegible]	41 22	[illegible]	[illegible]
		Area sown	[illegible]	...	21 [illegible]	[illegible]	17 14	12 72	[illegible]
[illegible]	Kharif	Jowar		...		[illegible]	[illegible]	22	[illegible]
		Bajra			...	15 [illegible]	[illegible]	[illegible]	[illegible]
		Pulses	...	.		15	6 21	[illegible]	[illegible]
		Cotton	1 74		...	[illegible]	[illegible]	[illegible]	[illegible]
		Fodder	...	...	...		[illegible]	[illegible]	[illegible]
		Others	15	...	...	[illegible]	[illegible]	[illegible]	[illegible]
		Area harvested	[illegible]		...	[illegible]	[illegible]	[illegible]	[illegible]
		Area failed	[illegible]	...	...	[illegible]	[illegible]	[illegible]	[illegible]
		Area sown	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]
	Rabi	[illegible]	[illegible]		...	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	...		[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]		...	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	...		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		Oilseeds	[illegible]		...	[illegible]	[illegible]	[illegible]	[illegible]
		Others	[illegible]		[illegible]	[illegible]		[illegible]	[illegible]
		Area harvested	[illegible]	...		[illegible]		[illegible]	[illegible]
		Area failed	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]
		Area sown	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]
	Total	Area harvested	[illegible]		...		...	[illegible]	[illegible]
		Area failed	[illegible]			[illegible]	...	[illegible]	[illegible]
		Area sown	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]

1	2	3	4	5	6	7	8	9	10
Assessment Circle	Harvest	Crop	Chahi	Nahri	Abi	Dahri	Barani	Bhur	Total
DAHAR KHARI	Kharif	Jowar	"		4 47	26	10 44	3 15	7·74
		Bajra	"		12 85	71	17 09	42 34	18 44
		Pulses	"	"	1 87	·05	2 27	7·20	2·34
		Cotton			2 96		9 19	7 44	7 22
		Fodder			3·73		12 75	15 18	10·49
		Others	1 87		·56		2 94	1 13	2·34
		Area harvested	1 87		26 44	1 02	54 68	76 44	46 56
		Area failed	·06		8 88	·05	10·26	14·24	8·78
		Area sown	1 93		34 82	1 07	64 94	90 68	55 34
	Rabi	Wheat	5 06		8 57	30	3 55	2·02	3 43
		Barley	31 21		8 57		15·70	13 60	15 14
		Gojra and gochni	2 33		8 94	26	11 34	6 26	8·09
		Gram			9 87	05	10 13	9 86	8·29
		Oilseeds	2 95				5 30	11 18	5 39
		Others	5 22		2 60	05	·24	·20	·70
		Area harvested	47·67		38 55	66	46 76	43 12	41·88
		Area failed	6 42		15 46		22 81	24 44	19·25
		Area sown	54 09		54 01	66	69 57	67 56	61 13
	Total	Area harvested	49 54		64·99	1 68	101 44	119 56	88 49
		Area failed	6·48		23·84	05	33 07	38 68	28 03
		Area sown	56 12		88·83	1 73	134 51	158 24	116 52
CHIKNOT	Kharif	Jowar			4 48	1 43	14 53	2·98	10·26
		Bajra			1 49	1 92	12·96	22 02	9 86
		Pulses				58	1·72	3 27	1 40
		Cotton			74	1 39	7 60	3 57	5 59
		Fodder			4 48	2 04	10·75	8 04	8·05
		Others	3·85		75	35	3·56		2 47
		Area harvested	3 85		11 94	7·71	51·06	39 88	37 63
		Area failed		...	4 48	2 41	13 48	3 87	9·86
		Area sown	3 85		16 42	10 12	64 54	43 75	47 49
	Rabi	Wheat	3 85		30 60	3 11	5 59	29	5 00
		Barley	60·23	"	7 46	52	3·92	1 79	3 21
		Gojra and gochni	5·77		47·02	1 05	18 43	6 84	18 63
		Gram	"		5 22	17	7 28	6 85	5 17
		Oilseeds					2 18	60	1 47
		Others	28 84	...	41·79	1 31	1 03		1 66
		Area harvested	107 69	"	132·09	7 06	38 43	6 37	30·14
		Area failed	46 16		44·03	3 83	19·02	5·06	15·09
		Area sown	153 85		176 12	10·99	58 05	21 43	45 23
	Total	Area harvested	111 54		144·03	14·77	89 49	56 25	67·77
		Area failed	46 16	...	48 51	6·34	33·10	8·93	24 95
		Area sown	157 70		192 54	21 11	122 59	65 18	92 72

As pointed out in paragraph 15 the crops on the barani soils include those grown without irrigation on the chahi and nahri soils, and there is not really the large area of double cropping on the barani soils which the figures indicate.

The results for abi and dahri are also vitiated by the percentages being worked out on the abi and dahri areas entered in the Area Statement which are very different from the final area of these soils given in paragraph 7.

The statement will be referred to in the succeeding paragraphs.

System of chahi cultivation.

19. The system of chahi cultivation is very simple. Wheat and barley are almost the only irrigated crops grown, the proportion of wheat being about one fifth. In the Bhuder and Dahar Mitha Circles, where the wells are sweet, a little cotton and tobacco are also grown, and in all circles except Bangar and Chikni a fairly large area of miscellaneous crops is irrigated from temporary wells. In the Rewari and Palwal Assessment Reports I have described in detail the method of cultivating the principal chahi crops, and I need not repeat the description here. Speaking generally, the Meo is inferior both in industry and resources to the Ahir and the Jat, and as these are the two most important factors in determining the quality of chahi cultivation, the chahi produce of this tahsil is in consequence inferior.

Nahri.

20. The system of nahri cultivation has been fully described in paragraph 20 of the Palwal Assessment Report. The system in this tahsil is broadly similar, and I shall only note in this paragraph the respects in which the nahri cultivation of this tahsil differs from that of Palwal. In the first place the soil, water-supply and character of the cultivators are all inferior to those of Palwal. The custom of irrigating nearly the whole nahri area annually and of excessive cropping have been already alluded to, in consequence we expect and find inferiority in the nahri produce of this tahsil. Again, while the principal crops grown are the same, the proportions which they bear to each other differ; there is a larger proportion of rabi crops than in Palwal and barley takes the place of wheat as the chief rabi cereal, a certain amount of irrigated gram is also grown, though it is admitted to give a very poor yield. The preference for barley and gram over wheat and cotton seems due to the following reasons:—The cultivation of the latter demands more labour than the former, wheat requires more water and manure than is probably available, while the pressure of population on the soil [illegible] a larger area of fodder [illegible]. The above facts taken in conjunction with the [illegible] (vide Palwal Assessment Report, paragraph [illegible]) [illegible] that the Meo [illegible] the Jat, and the fact [illegible]

Standard [illegible]

21. [illegible]

Barani.

22 The cultivation of the barani soils differs considerably in the various circles In the Bangai Circle the soil is generally too dry and in the Bhuder Circle too light for the successful growth of unirrigated rabi crops, consequently in both these circles nearly the whole barani area is put under kharif crops consisting of jowar where the soil is Chiknot, bajra, jowar, and cotton where the soil is narmot, and magda and bajra only where the soil is bhur In these two circles the proportion of unirrigated cotton is smaller than in the more fertile lands of the valley At the rabi, if the September rainfall is good, the best land which has been kept fallow is put under bejhai (barley and gram), while the remaining area which has already borne a crop of bajra or jowar and is strong enough to grow rabi crops is sown with "dofash" gram This area is of necessity small in the Bhuder Circle These remarks as to double cropping do not apply to the chiknot of these circles, as Chiknot unless moistened by flooding or percolation cannot be double cropped In the Dahar Mitha Circle, owing to the natural fertility of the soil, the area under rabi crops is larger and the proportion of wheat, barley and mixtures to gram sown alone is much larger, similarly at the kharif the proportions of jowar and cotton to bajra are larger than in the two previously mentioned circles.

The Dahar Khari and Chiknot Circles are distinguished from the other circles by the large proportion of Chiknot in the soils Statement X shows that in these circles there is normally a large preponderance of rabi over kharif crops, though owing to the recent dry rabis the areas under kharif and rabi crops during the years selected for the produce estimate are nearly equal

In the Dahar Khari Circle the cultivation resembles that of the Dahar Mitha Circle, but there is more cotton, wheat and gochni In the strong soil of the Chiknot circle the area under jowar is equal to that under bajra, while wheat and gochni are almost the only rabi crops.

In the Palwal Assessment Report I have described the method of cultivating jowar, bajra, cotton, bejhar and gram on the various barani soils, and the system of cultivating these crops in this tahsil is the same, except that in the Dahar and Chiknot Circles jowar is not generally sown thickly to yield half grain and half fodder, but is sown sparsely for grain Pulses are as usual grown with jowar and bajra, and til and hemp with cotton The method of cultivating gochni has been described in the preceding paragraph On the harder soils oilseeds are always sown in lines, but in light moist magda and bhur, chiefly in the Bhuder and Dahar Circles, sarson is frequently grown alone in soil which has been well fertilized by cattle which are penned out during the rainy season. Owing to the scarcity of cattle there is very little manuring In the case of ordinary barani land fallows take the place of manure, but the soil of the low-lying lands is so naturally fertile that it is able to stand without exhaustion a large amount of double cropping

Changes of Cropping

23 The following table compares the percentages of the chief staples at last settlement and now As already stated, the settlement figures are worked out from Form D while the present figures are arrived at by calculating the percentage which the matured area of each crop bears to the total matured area. It was impossible to make the calculation on sown areas, as though the total sown area is given in the crop statement the sown area of each crop is not available

The comparison is a very rough one because the settlement areas are the sown areas of the year of measurement, and are neither the figures of a series of years nor even of one year, as the villages were measured in different years

Some of the results of the comparison are astonishing and show what serious errors were introduced into the produce estimate by mistakes of classification and by taking the figures of only one harvest The area under cereals (especially kharif cereals) and cotton was much overestimated, as the miscellaneous crops (pulses, hemp, sesame and oilseeds) which are grown with them were not recorded at all, the whole area being shown as under the superior crop Similarly the large decrease of the area under cotton, which is due partly to the cause just explained, must have been due partly to the area being that of one harvest only, which happened to be exceptionally favourable to the cultivation of cotton. Owing to the lateness of the rains in recent years there probably has

been some real decrease of cotton in favour of bajra, but it has not been so large as the figures indicate. The serious under-estimate of the area under fodder crops (guar-chari) is due to the fact that the area shown as under guar is that of guar sown alone, which forms a very small proportion of the total area under this crop:—

1	2	3	4	5	6	7	8	9	10	11	12	
	Bangar		Bhur		Dakar Mitha		Dakar Khari		Chahat		Whole Tahsil	
Crop	Settlement	Now	Settlement	Now	Settlement	Now	Settlement	Now	Settlement	Now	Settlement	Now
Jowar	[illegible]	10	[illegible]	[illegible]	14	11	[illegible]	5	15	[illegible]	18	9
Bajra	[illegible]	27	[illegible]	[illegible]	[illegible]	27	16	15	6	[illegible]	[illegible]	[illegible]
Cane	1	1	..				..		..			1
Cotton	[illegible]	10	11	[illegible]	12	[illegible]	31	9	[illegible]	[illegible]	[illegible]	8
Guar Chari	[illegible]	8	[illegible]	12	[illegible]	[illegible]	[illegible]	[illegible]	6	11	[illegible]	[illegible]
Wheat	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Barley	[illegible]	10	12	12	14	[illegible]	24	17	[illegible]	[illegible]	10	12
Bejhar	12	..	[illegible]		[illegible]		.	.	[illegible]	.	[illegible]	
Gram	17	[illegible]	[illegible]	6	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	12
Gujra Gochni	2	[illegible]	[illegible]	3	11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Oilseeds	.	[illegible]	..	[illegible]		10	1	[illegible]		[illegible]	[illegible]	[illegible]
Others	[illegible]	6	.	[illegible]	4	[illegible]	[illegible]	[illegible]		[illegible]	1	7
Total	100	100	100	100	100	100	100	100	100	100	100	100

I proceed to discuss the comparison circle by circle.—

(1). *Bangar Circle*.—The first noticeable feature is the substitution of bajra for jowar as the chief kharif cereal. There has probably been some change in the direction [illegible] partly to the [illegible] of population [illegible] the [illegible] food crop of the [illegible], partly to the [illegible] [illegible] [illegible] better than jowar, and partly to the introduction of canal irrigation [illegible] change in the [illegible] unfavourable to jowar, but I do not believe the change has been anything like as great as the figures indicate. [illegible]

(5). *Chiknot Circle* —The same remarks apply with regard to cotton as in the Dahar Khan Circle Otherwise there seems to have been little change, and the large percentage of wheat at settlement as against gochni now is probably due to a misclassification.

The serious overestimate of the area under the more valuable crops at the expense of the less valuable, and the underestimate of the area under guar, the value of which was not included in the Produce Estimate, all tended to make Mr Channing's estimate of the value of the produce excessive.

CHAPTER IV.—RENTS AND TENANCIES.

Cultivating occupancy

24 The following statement shows the percentages on total cultivation of the land held by the owners themselves and by the various classes of tenants at settlement and now The figures are abstracted from Form B of Mr. Channing's Report and Statement XI of this Report —

1	2	3	4	5	6	7	8	9	10	11	12	13
Circle	Cultivated by the owners or held rent free		Held by occupancy tenants paying				Held by non-occupancy tenants paying				Area under competitive cash rents	
			Cash rents		*Kind rents*		*Cash rents*		*Kind rents*			
	Settlement	Now	Settlement	Now	Settlement	Now	Settlement	Now	Settlement	Now	Settlement	Now
Bangar	68	65	7	8			25	21		6	6	13
Bhuder	65	54	13	14			22	27		5	6	19
Dahar Mitha	68	52	7	6			25	35		7	12	31
Dahar Khan	78	55	7	6			13	26	2	13	2	21
Chiknot	84	61	4	7			11	15	1	17	1	6
Total Tahsil	70	59	8	9			22	25		7	6	18

The decrease in the area cultivated by the owners themselves and the increase in the area held by non-occupancy tenants paying cash rents is due to the large area under mortgage Batai is an increasingly popular form of rent—especially on the hard black clay soil of the Chiknot Circle, where the produce is very precarious and cash rents are almost unknown

The area paying competitive cash rents is, as we should expect, much larger than at settlement, but owing to the pressure of population on the soil is not very large The large percentage in the Dahar Mitha Circle is due to the whole of the large village of Doha being cash rented Most of the rents in column 13 are unfortunately paid to mortgagees

Kind rents

25 Statement XI shows the mode in which kind rents are paid As the area under batai is so small, the data are very *meagre* Here, as in Palwal, the share of an irrigated chahi crop is one-third From the statement it appears as if the share were one-half, but this is because most of the rents are of unirrigated crops grown on chahi land

The landlord's share of an irrigated canal crop is, as in Palwal, one-half, but he pays half the cost of the seed and half the canal dues In this tahsil no exception is made in the case of sugarcane, of which the share is also one-half, but here the landlord shares all the expenses of cultivation instead of only the expenses specified in paragraph 24 of the Palwal Report The landlord's share of cane is therefore no higher than in Palwal. The share of all crops other than irrigated crops grown on chahi and nahri land is one-half, as in Palwal, and as in

this tahsil at last settlement. It seems a high rate for all but the moist low-lying soils, but it is the prevailing rate on similar soils in other tahsils of the district. Mr. O'Dwyer assumed a rate of two-fifths in Alwar, and this is certainly a fairer all-round rate, but to adopt it in this tahsil would be opposed to the clearest evidence. A share of the straw is always taken of chahi, nahri and barani crops alike, but no *Haqq* or [illegible] are exacted.

Zabti rents are unknown.

26. The percentage of the total cultivated area which is cultivated by tenants paying at other than revenue rates (with or without malikana) is given in the table in paragraph 24. At last settlement no attempt was made to frame cash rent rates. Mr. Channing wrote (Assessment Report paragraph 26) . . . "The vast majority of tenants are connected with the cultivating proprietary brotherhoods and pay merely customary rates. . . In only a very few villages do the tenants pay rates at all representing the letting value of the land. [illegible] rates will be hereafter compared with the proposed assessments." In all circles, except the Bangar, the jama proposed was well above the jama at half-rent rates.

Mr. Wilson in the Revision Report went into the subject of cash rents at considerable length (*vide* paragraphs 54—66), and he appended a statement (Appendix VIII) showing the incidence of more or less competitive cash rents at settlement for each circle and the whole tahsil. I reproduce it here for facility of reference, adding the incidence of the rents given by Mr. Channing in his Assessment Report, which agrees with the incidence of Mr. Wilson's rents in all circles except the Bangar :—

1	2	3	4	5	6	7	8
Assessment Circle.	[illegible]	[illegible]	Area in acres.	Rent.	Rate per acre.	[illegible]	[illegible]
				Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.
[illegible]	[illegible]	[illegible]	[illegible] 137	[illegible] 111	2 [illegible]	2 7 [illegible]	1 4 0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2 [illegible]	2 [illegible]	1 4 [illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] 0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1 [illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible] VIII [illegible]

[illegible] VIII [illegible]

[illegible]

Mandikhera and Chiknot Circles, separate figures for the present Dahar and Chiknot Circles are not available

1	2	3	4	5
Year	INCIDENCE OF CASH RENTS PAID BY TENANTS AT-WILL NOT BEING AT REVENUE RENTS			
	Bangar	Bhuder	Dahar	Total Tahsil
	Rs a p	Rs a p	Rs a p	Rs a p
1891 92	4 1 0	3 8 0	4 3 0	4 0 0
1892 93	3 1 0	3 2 0	4 6 0	3 10 0
1893 94	3 2 0	2 15 0	4 11 0	3 13 0
1894 95	3 2 0	2 13 0	4 10 0	3 12 0
1895 96	3 3 0	2 8 0	4 11 0	3 12 0
1896-97	3 4 0	2 9 0	4 13 0	3 13 0
1897-98	3 7 0	2 9 0	5 3 0	4 1 0
1898 99	3 9 0	2 13 0	3 2 0	3 3 0
1899 00	3 11 0	2 11 0	5 6 0	4 3 0
1900 01	3 12 0	2 12 0	5 8 0	4 5 0
1901-02	3 9 0	2 12 0	5 11 0	4 6 0
1902 03	3 3 0	2 8 0	6 7 0	4 8 0
1903 04	3 9 0	2 8 0	5 6 0	4 3 0
1904-05	3 12 0	2 9 0	5 9 0	4 4 0
1905 06	3 12 0	2 10 0	5 13 0	4 7 0
Rise per cent. since settlement	54	24	86	80

The percentage of increase is enormous, and in the Dahar Circle does not correspond to an equivalent increase in the value of land There the rents have been forced up by rack-renting mortgagees and by the severe pressure of population on the soil I proceed to put in the usual table abstracted from statements XIV and XV shewing the result of the attestation of competitive rents at village inspections —

1	2	3	4	5	6	7	8	9
Circle	Detail	Chahi	Nahri	Abi	Dahri	Chiknot Narmot	Magda	Bhur
		Rs a p	Rs a. p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p
Bangar	Total rents	4 11 0	4 10 0			3 10 0	3 10 0	2 0 0
	Corrected	4 3 0	4 3 0			3 13 0	3 10 0	1 14 0
Bhuder	Total rents	4 13 0		7 14 0	5 13 0	3 9 0	3 9 0	2 2 0
	Corrected	5 11 0		6 2 0	5 9 0	3 10 0	3 10 0	1 15 0
Dahar Mitha	Total rents	7 14 0			7 12 0	4 4 0	6 1 0	3 6 0
	Corrected	7 11 0			6 15 0	3 14 0	4 6 0	2 7 0
Dahar Khari	Total rents	7 0 0		6 3 0	6 11 0	6 8 0	6 8 0	5 14 0
	Corrected	7 3 0		6 4 0	6 10 0	6 7 0	6 7 0	5 10 0
Chiknot	Total rents	2 11 0				3 10 0		
	Corrected	3 2 0				3 9 0		

NOTE.—Nahri includes chahi nahri.

There has not therefore been very much alteration in any circle except Dahar Mitha where the whole rents of the rack-rented village of Doha have been excluded

In the Bangar Circle there is very little difference in the rent of any soil except bhur The chahi and nahri are both inferior, and as a rule the same rent is taken on them as on loam The prevailing rent rate on all soils, except bhur, is Rs 2 per pakka bigha=Rs 3-5-0 per acre. In canal villages and in villages with a better class of barani soil Rs 3 per pakka bigha is often taken On bhur the rate is Re 1 on inferior and Re 1-8-0 on average land In this circle most of the recorded rents are full fair rents, and the corrected rents adequately represent the letting value of the land

In the Bhuder Circle the customary rates on bhur and loam are the same as in the Bangar Circle, and are fair for the soils, but the chahi is superior, and, as we should expect, a much higher chahi rent is taken. The customary chahi

rent varies from Rs. 3 to Rs. 4 per pakka bigha, and the corrected chahi rent adequately represents the letting value of chahi land in this circle. The dahri rent is the same as the chahi.

On the fertile soils of the Dahar Circles much higher rents are taken than in the other two circles. In the Dahar Mitha Circle the customary chahi rent rate varies from Rs. 4 to Rs. 5 and averages nearly Rs. 5 per pakka bigha= Rs. 8 per acre. This is a high chahi rate for the Mewat and testifies to the excellence of the chahi of this circle. The dahri rate is as usual nearly the same as the chahi, the value of these soils being considered equal by the zamindars of this tahsil. The customary rate on loam is Rs. 3 per pakka bigha=Rs. 4-12-0 per acre, which is the rate on all good fertile loam in this district (e.g., the Bangar Circle of Palwal). The corrected rents on this soil give a much lower rate, because in the south of the circle under the western range of hills there is a strip of dry loam which lies high and is out of the reach of flooding: this loam resembles the dry Bangar loam, and the same rent (Rs. 2 per pakka bigha) is taken on it. An unduly large proportion of the narmot rents happen to be on this soil, and hence the average narmot rent is much lower than it ought to be; it should be at least Rs. 4-6-0 per acre, which is the magda rate. The bhur in this circle is moist and good, and the customary rent rate on bhur is from Rs. 1-8-0 to Rs. 2-0-0 per pakka bigha. In this circle, with the exception of the narmot rate, the corrected rents fairly represent the proper letting value of the land.

The soil of the Dahar Khari Circle is, as I have already said, the best in the tahsil, and even including the bhur is all very much of one quality—a most fertile soil almost, if not quite, equal to dahri.

The well water is salt, and as a rule no higher rent is taken on chahi than on loam. The almost universal rent rate on all soils alike is Rs. 4 per pakka bigha=Rs. 6-6-0 per acre. Some mortgagees take Rs. 5=Rs. 8 per acre, but these are generally a rack rent, and rents at this rate have been excluded. The corrected rent of dahri, abi, narmot and magda give practically the customary rate. The rent on chahi is raised slightly by the higher rents taken on [illegible], while that of bhur is slightly lower. With these exceptions the rents are practically at a uniform rate, and the high rate indicates the fertility of the soil. On the very precarious soils of the Chikni Circle [illegible] the [illegible] rent, and then [illegible] cash rents. Where cash rents are taken the customary rate is Rs. 2 per pakka bigha on all soils or the same as [illegible] dry loam. This is a fair rate for [illegible], but [illegible] that they [illegible] other circles.

In Alwar and Bhartpur Mr. O'Dwyer [illegible] rents, [illegible] Chapter VII [illegible] [illegible] rents [illegible] corrected rents [illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Allowing for possible differences of soil classification the rent rates in tahsil Ramgarh correspond very closely with those in the Dahar Mitha Circle. The bhur rates are lower, but Mr O'Dwyer reduced the rates as they stood to allow for years in which this soil was not cultivated The attested rents on this soil ranged from Rs 1-11-0 to Rs 5, and the average rent rate was probably not lower than ours.

Tahsil Kama adjoins the Bangar Circle and though the chahi and dahri rates are much higher, the barani rates correspond with remarkable closeness · the difference in the chahi and dahri is probably due to a difference of classification Tahsil Pahari adjoins the Bangar and Bhuder Circles and Tahsil Gopalgarh the Bhuder Circle The rates in Gopalgarh correspond with extraordinary closeness to those of the Bhuder Circle, but those of Pahari are very much higher, and resemble the rates in Dahar Mitha From Mr O'Dwyer's description on pages 9 and 10 of his Assessment Report of the northern tahsils of the Bhartpur state I gather that all these tahsils are physically superior to the Bangar and Bhuder Circles of the Firozpur tahsil, and the correspondence in the rents may therefore be accidental, being due in Kama and Gopalgarh to the absence, as stated by Mr. O'Dwyer, of competition

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CHAPTER V —HALF-NET-ASSETS BASED ON BATAI

Character of the Selected Harvests

27 In the Rewari and Palwal tahsils the years selected for the produce estimate were the years 1898-99 to 1903-04, excluding the famine year of 1899-1900, but in this tahsil, where the rabi cropping is so important, these years are not representative owing to the series of bad rabis With the approval of the Settlement Commissioner I have substituted the five years 1900-01 to 19004-05, which give a much better average The following is a brief description of the harvests

Kharif 1900 —Well distributed rain in June, July and August was followed by a deluge in September which gave a bumper harvest in all parts of the tahsil

Rabi 1901 —Very large sowings were made as the result of the heavy rain in September , the winter rains were excellent, and a fine harvest was reaped wells and the canal were very little used

Kharif 1901 —Sowings were normal, and as good rain fell in July and August, the crop promised well, but the monsoon withdrew at the end of August and, except on canal lands, the crops failed and only an eight-anna harvest was reaped

Rabi 1902 —As no rain fell in September the area sown was very small, and as the winter rains entirely failed the crop was nowhere better than an eight-anna one, and in parts of the tahsil conditions approaching scarcity prevailed

Kharif 1902 —Good rain in June made large sowings possible excellent rain fell in July and August, and sufficient in September the result was a good harvest in all circles

Rabi 1903 —A fairly large area was sown, but as the winter rains again failed the crop was everywhere below average

Kharif 1903 —The rains began late and were scanty , sowings were not extensive, but as rain was very well distributed most of the crops matured the harvest was slightly below average in all circles except Dahar Khari and Chiknot, where for some reason or other it was good

Rabi 1904 —Very little rain fell until the first week in March, when there was a good shower, which saved the irrigated crops, but was too late to save the barani crops, most of which completely failed in all circles, the harvest was only eight annas.

Kharif 1904.—Good rain in May, June and July permitted of early and extensive sowings. There was a long break at the end of August and beginning of September, but a cyclonic storm on September 9th gave excellent rain and saved the harvest. The cereals and pulses were damaged by excessive rain, but the outturn of cotton was excellent, and on the whole the harvest was everywhere much above average.

Rabi 1905.—The heavy rain in September made extensive sowings possible, and very unusual rain in November led to a further extension of the crop. Good rain was received at intervals, and the harvest promised to exceed the record both as regards quality and quantity, but severe and unprecedented frost at the end of January did great damage, from which the oil-seeds and early-sown barley never recovered. The other crops recovered after a good shower in March, and in this tahsil, which owing to its hills is more sheltered from frost than any other, the harvest was a good one.

The character of the harvests may be summarised in the following table:—

1	2	3
Year	*Kharif*	*Rabi*
1900-01	Very good ...	Very good
1901-02	Bad	Bad
1902-03	Good ...	Below average
1903-04	Below average ...	Bad
1904-05 ...	Good	Good

Referring to Statement X, it will be seen that these years gave a result which is [illegible] in the [illegible] and [illegible] Circles, [illegible] the *Kharif* is the chief crop, but which is 4, [illegible] and 6 per cent. [illegible] average in the other circles respectively, [illegible] the percentage of [illegible] [illegible], and the [illegible] have more than [illegible] the good *Kharifs*.

23. The [illegible] percentage of crops failed to the total area [illegible] may [illegible] correct in all circles, except [illegible] (*vide* Assessment Report, paragraph 27), [illegible] of the [illegible] villages [illegible] the [illegible] of the crop [illegible] [illegible] below the [illegible] of failed crop [illegible] [illegible] table:—

1	2	3
Circle	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

[illegible]

Allowing for possible differences of soil classification the rent rates in tahsil Ramgarh correspond very closely with those in the Dahar Mitha Circle. The bhur rates are lower, but Mr O'Dwyer reduced the rates as they stood to allow for years in which this soil was not cultivated The attested rents on this soil ranged from Rs 1-11-0 to Rs 5, and the average rent rate was probably not lower than ours.

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The character of the harvests may be summarized in the following table —

1	2	3
Year	*Kharif*	*Rabi*
1900 01	Very good	Very good
1901-02	Bad	Bad
1902-03	Good	Below average
1903 04	Below average	Bad
1904-05	Good	Good

Referring to Statement X, it will be seen that these years give a result which is nearly average in the Bangar and Bhuder Circles, where the *kharif* is the chief crop, but which is 4, 5½ and 6 per cent below average in the other circles respectively, where the percentage of *rabi* crops is much larger, and the bad *rabis* have more than counterbalanced the good *kharifs*.

Crop entries

28. The recorded percentages of crops failed to the total area sown may be taken to be correct in all circles, except the Bangar, where, as in the Palwal Tahsil (*vide* Assessment Report, paragraph 27), the under-estimate of the failed area of irrigated and unirrigated crops in canal villages seriously affects the reliability of the cropping figures I compare below the recorded percentages of failed crops in this circle with what I think it ought to be —

1	2	3
	Percentage	
Class of crop	Recorded.	Real
Irrigated from wells	4	8
„ „ Canal	3	15
Unirrigated	20	30

The recorded percentage of failed chahi crops is less than in the Bhuder and Dahar-Mitha Circles, where the water is much sweeter, and I do not think the correct percentage can really be less than 8 I took 10 per cent. as the correct percentage of failed nahri crops in the Palwal Tahsil In this tahsil, where all the conditions make for inferiority, I do not think it can be less than 15 per

cent. Similarly, 20 per cent is much too low a percentage for the dry loam of this circle, and 30 per cent is a moderate estimate The same remarks apply in regard to mixed crops as in the Palwal tahsil (*vide* Assessment Report, paragraph 27 (*b*)).

Yields.

29 Statement XII gives the data on which the assumed yields are based. In many cases the results of experiments are satisfactory, but in others they are not owing either to the abnormal nature of the harvests under observation or to the ineradicable tendency of subordinate officials to select the best fields.

I am not inclined to attach much value to any experiment which I have not myself inspected, and I have supplemented the information derived from experiments by constant enquiries from the people at village inspections. The yields assumed by Mr Channing at last settlement are entered in Statement XII for reference They seem to me in most cases rather too high.

I proceed to discuss the yield of each important crop separately, taking them in the order in which they are entered in Statement XII as there is very little difference in the yield of chiknot, narmot and magda, I have classed these soils together under the name of barani

Jowar, 9 per cent

This crop is well suited to the soil of all circles except Bhuder. It grows especially well in the rich clay soil of the centre of the valley In inferior or sandy soil it is sown rather thick and grown half for grain and half for fodder, and this custom must be borne in mind in considering the yield in the various circles Unfortunately experiments give very little help in determining the yield Excessive September rainfall seriously reduced the yield of grain both in 1904 and 1906, and in 1905 owing to the total failure of the rains there was no crop at all In estimating the yield of this crop therefore I am dependent entirely on enquiries from zamindars and officials, and on experiments conducted in neighbouring tracts

Jowar is grown to such a very small extent on irrigated chahi and nahri lands, on dahri and on bhur, that the assumed yields on these soils are of very little importance, and do not require discussion On barani land in the Bangar Circle I have adopted a yield of 200 sers this is the same as the yield assumed for the Bangar Circle of the Palwal Tahsil it is a lower yield than I have adopted in the Dahar Circles because canal irrigation by saturating the subsoil affects the yield of jowar, and as the soil is inferior, the crop is sown rather thick and yields less grain. In the Bhuder Circle the loam is light, and I have adopted the same yield as in the Bangar Circle In the Dahar Mitha Circle I have assumed 260 sers, as the soil is of better quality, and in the Dahar Khari Circle, where the barani soil is a rich loam or clay, and a really heavy yield is obtained—280 sers In the Chiknot Circle I have assumed 240 sers Mr Channing took 320 sers in all circles except Bhuder, but I do not think such a high estimate is justified, and it is certainly never admitted to be an average yield by the zamindars Jowar is a delicate crop and its liability to suffer from the effects of drought in bad years and of excessive rain in good years makes moderation in fixing the yield essential

Bajra 28 per cent.

This is the chief crop of the year, and it is most important to determine its yield accurately In this tahsil experiments give very little assistance in determining the yield, but in other parts of the district a number of reliable experiments have been performed.

The average yield of unmanured bajra is about 200 sers on all light barani soils, except inferior bhur I have assumed a yield of 160 sers on barani and 140 sers on bhur in the Bangar and Bhuder Circles, where the loam and bhur are both inferior

In the Dahar Circles, where the best bajra grows, I have assumed 220 and 240 sers, respectively, on barani and 200 sers on bhur Bajra does not do well in a stiff clay soil, and in the Chiknot Circle I have assumed 160 sers on barani, which is the same as the bhur yield in that circle.

For the irrigated soils and for abi and dahri I have taken slighter higher yields than on barani

Mr Channing took 240 seis in all circles except Chiknot, where he took 160 seis His experiments only gave an average of 200 seis, but the season in which they were performed was unfavourable on account of excessive rain, and he consequently went above the result of his experiments. In the Bangar and Bhuder Circles, especially Bhuder, the estimate seems much too high for unmanured bajra.

Maize,—per cent

The area under this crop is very small, and no experiment has ever been performed I assume 320 sers as the irrigated and 240 as the barani yield in all circles where maize is grown for bhur I assume 200 sers.

Pulses, 4 per cent.

The area under pulses other than guar, which is grown exclusively for fodder, and for which no yield is assumed, is very small. Urd is grown with jowar and mung, and moth with bajra. In the Bangar, Bhuder and Chiknot Circles I have taken the same yields for these pulses as in the Bangar Circle of Palwal, while in the Dahar Circles I have taken 40 sers more. Chaula is grown either with bajra or in very inferior bhur alone It is of importance only in the Bhuder Circle In the Bangar, Bhuder and Chiknot Circles I have taken the same yield as in Palwal, and in the other two circles 40 sers more These estimates are low as compared with Mr. Channing's, but moderation is essential in view of the method of cultivating and of recording these mixed crops.

Til, 1 per cent

Til is generally grown with cotton or jowar, but it is also sometimes grown alone Experiments in the Dahar Mitha Circle indicate a yield of 180 sers, but as it is generally grown as a mixed crop, I think a low yield should be assumed, and I propose 140 sers on all soils and in all circles. this is the same yield as I assumed in the Bangar Circle of Palwal

Cane, 1 per cent

No experiment has ever been performed in this tahsil, but in the Bangar Circle of Palwal experiments indicate an average yield of 936 sers for irrigated cane, and in that tahsil I assumed a yield of 840 sers In this tahsil the cultivation of cane is very inferior, and I do not think it would be safe to assume a higher yield than 640 seis, which is the higest yeild ever admitted by the zamindars

Cotton, 8 per cent

Cotton requires good cultivation, and as the Meos are inferior as cultivators to the Jats, the yield of cotton in this tahsil is, other things being equal, inferior to that of the Palwal tahsil In the Bangar Circle the soil and cultivation are both inferior to those of Palwal for barani cotton in this circle I assume a yield of 160 sers, or 40 sers less than in Palwal in this circle I do not think there is any difference between the yield of canal irrigated and barani cotton, and I assume the same yield this assumption is justified by the result of experiments which give an average yield of only 184 sers for canal cotton For the inferior bhur of this circle I assume a yield of 100 sers only In the Bhuder Circle I adopt the same yields on barani and bhur as in the Bangar Circle

The best cotton grows in the low-lying, fertile lands of the valley. In the Dahar Mitha Circle I assume 200 sers for barani and 120 sers for bhur both these estimates are justified by experiments and are exactly the same as I made in the Bangar Circle of Palwal, which, as regards produce, this circle closely resembles. The yield of cotton in the Dahar Khari Circle is superior to that of the Dahar Mitha Circle, and I assume 20 sers more on barani than in that circle · for bhur I take the same yield The yield of cotton is very poor in the stiff clay of the Chiknot Circle, and I assume 140 sers only, which is less than in any other circle For the bhur of this circle I assume 100 sers, as in Bangar and Bhuder.

I have generally taken the same yields on chahi and flooded land, and the yield on these soils is in nearly all circles assumed to be 40 sers more than the barani yield Mr Channing made no distinction between irrigated and unirrigated cotton He took 200 sers in the Landoha and Mandikhera Circles, 160 sers in the Chiknot and Bangar Circles, and 140 sers in the Bhuder Circle. These seem to me very fair estimates, and they agree closely with the yields which I have now assumed.

Wheat, 4 per cent.

The dry soil of the Bangar Circle is not suited to wheat It is somewhat difficult to estimate the average yield of chahi wheat in this circle, because the quality of the chahi varies greatly In the east of the circle the wells are nearly all salt, and irrigation is very inferior, while under the hills on the west the soil is better, and benefits by drainage water from the hills The chahi of the villages lying in the bed of the Lohinga drainage canal is especially good I assume a chahi yield of 400 sers, which is 80 sers less than the assumed yield in the Palwal Bangar, where the chahi is much superior Mr Channing took 520 sers, but this seems too high an estimate for the inferior chahi of this circle The yield of canal wheat is very inferior, and I assume a yield of 320 sers Experiments only indicate a yield of 300 sers, but the years in which the experiments were made were both below average The assumed yield is 20 per cent. below that assumed in Palwal, and seems a sufficiently moderate estimate The dahri of this circle is inferior, and I assume a yield of 360 sers only For barani and bhur I assume 240 and 200 sers respectively.

In the Bhuder Circle the chahi and dahri are both better than in the Bangar Circle, and I assume 80 sers more for the chahi and 40 sers more for the dahri For barani and bhur I take the same yields

The chahi wheat of the Dahar Mitha Circle is the best in the tahsil, and Mr Channing assumed the very high yield of 600 sers I think this was a slight over-estimate I assume 560 An experiment conducted this *rabi* (1907) yielded only 409 sers per acre, but the produce was severely damaged by rust and by dry hot winds which blew in the first week of April In this circle the yield of dahri is very good, and I assume 440 sers the dahri experiment conducted this harvest was below average for the same reason as the chahi experiment For barani and bhur I assume 280 and 200 sers respectively

In the Dahar Khari Circle the chahi is good, though as the water is salt, it is inferior to that of the Dahar Mitha Circle, and I assume 40 sers less than in that circle The dahri is also inferior to that of the Dahar Mitha Circle, and so I assume a lower dahri yield, while the yield of barani wheat is better than anywhere else in the tahsil, as the strong moist clay soil is especially suited to wheat for barani I assume 320 sers and for bhur 240 sers

In the Chiknot Circle the chahi is very inferior, and I have assumed a very low chahi yield (320 sers) For abi and dahri I assume 360 sers, for barani and bhur 280 and 200 sers respectively The barani yield may seem high, but wheat is the crop best suited to the black chiknot of this circle, and either alone or in the form of gochni is almost the only barani rabi crop grown

Barley, 12 per cent

After bajra this is the most important crop of the year As an irrigated crop it is almost always grown alone, while as an unirrigated crop it is, except on inferior bhur, generally grown in the form of bejhar Experiments are again of very little use, and in estimating the various yields I have been guided chiefly by enquiry and observation Where the soil is dry or light, as in the Bangar and Bhuder Circles, the yield of barley is considerably higher than that of wheat, while in the moist, low-lying soils of the valley, which are especially suited to wheat, there is much less difference between the yields of the two crops

For the chahi yield I have taken 480 sers in the Bangar Circle, 600 sers in the Bhuder, 640 sers in the Dahar Khari Circle and 680 sers in the Dahar Mitha Circle In the Chiknot Circle I have taken 400 sers only For the nahri yield I have taken 400 sers, which is 80 sers less than in Palwal, experiments indicate a much higher yield of canal barley, but the crops of both the years

under experiment were much above average For the abi and dahri yields I have taken 40 sers more than the wheat yield in the Bangar, Bhuder and Dahar Mitha Circles, 80 sers more in the Dahar Khari Circle, and the same as the wheat yield in the Chiknot Circle For the barani yield I have taken 280 sers in the Bangar, Bhuder and Chiknot Circles, 360 in the Dahar Mitha Circle, and 400 in the Dahar Khari Circle. For bhur I have taken 240 sers in all circles except Dahar Khari, where I have assumed 280 sers.

Gram, 13 per cent —Except in the Bangar Circle, gram is chiefly grown in the form of bejhar In the Bangar Circle it is generally grown alone as a second crop after bajra, but the yield of "dofasli" gram does not seem to be much less than when it is grown in fallow land, as it is only grown as a second crop in seasons which are above the average. The fact that the crop statistics do not distinguish between bejhar and gram grown alone, or between gram grown in fallow land and "dofasli" gram makes it somewhat difficult to estimate the yield. It is very heavy in the moist low-lying lands of the valley, but is not so good in the Bangar, Bhuder and Chiknot Circles In the Bangar and Bhuder Circles, I assume a barani yield of 280 sers, in the Dahar Mitha Circle 360 sers, in the Dahar Khari Circle 400 sers, and in the Chiknot Circle, where the soil is not suited to gram, 240 sers. In the inferior bhur of the Bangar, Bhuder and Chiknot Circles I assume 200 sers, and in the good bhur of the two Dahar Circles 240 sers In all circles I have assumed about 40 sers more on chahi, abi and dahri than on barani. There is a small area of canal irrigated gram, but the yield of this is very inferior, and I assume only 280 sers, or the same as the barani yield.

Gojra and Gochni, 5 per cent.—The yield of gojra is assumed to be half the combined yields of wheat and barley On dahri and barani land wheat is almost invariably sown in the form of gochni, for gochni yields intermediate between those of wheat and gram have been assumed, but approximating nearer to the wheat yield as the proportion of wheat is larger than that of gram.

Rabi oil-seeds, 4 per cent.—Sarson and taramira are the only oil-seeds grown. I assume the same yields for both On chahi, nahri and dahri I assume 200 sers and on barani and bhur 160 sers in all circles The barani yields are supported by the results of a number of experiments, which indicate a yield of 180 sers in all circles and on all soils A good field of these crops will yield 240 sers, but they—especially sarson—are delicate and precarious crops, liable to suffer from the effects of drought, frost and excessive rain, and a full yield is very rarely obtained. I do not think it would be safe to go above the assumed yields, which are the same as I adopted in Palwal.

Others, 11 per cent —It is impossible to assume yields for the miscellaneous crops grown at both harvests, and to these and to the fodder crops I have assigned cash values

For purposes of comparison I append below, in sers per acre, the yields of the principal crops assumed by Mr. O'Dwyer in the Ramgarh tahsil of the Alwar State, which adjoins and resembles the Dahar Mitha Circle of this tahsil, and the three adjoining tahsils of Bhartpur

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Crops	Ramgarh (Alwar)			Gopalgarh (Bhartpur)				Pahari (Bhartpur)				Kama (Bhartpur)			
	Chahi	Dahri	Barani	Chahi	Dahri	Barani	Bhur	Chahi	Dahri	Barani	Bhur	Chahi	Dahri	Barani	Bhur.
Jowar	640	480	320	400	400	400	400	400	400	300	300	350	300	300	250
Bajra	512	384	256	500	400	300	250	500	400	300	250	500	300	300	250
Cotton	320	272	150	400	300	300	300	400	250	250	250	400	250	250	
Pulses		320	208	250	250	250	150	250	250	250	150		250	250	150
Wheat	608	528	256	800	600	400		700	600	400		750	600	400	..
Barley	978	640	384	900	700	400	400	700	700	400	400	850	700	450	
Gram	384	336	256	700	700	400	400	700	700	400	400	700	700	400	400
Mixtures	736	592	320	600	600	500	500	600	600	500		700		500	500

Comparing first the yields of the Ramgarh tahsil and of the Dahar Mitha Circle it will be seen that there are considerable differences between these yields and those which I have assumed The yields of jowar, bajra and pulses assumed by Mr O'Dwyer are higher than mine and agree with Mr Channing's. I cannot however help thinking that for unmanured jowar and bajra my yeilds are not too low Of the remaining barani yields Mr O'Dwyer's estimates for wheat, barley and mixtures are about the same as mine, while those for cotton and gram are lower The chief difference however lies in the chahi and dahri yields, which are in the case of barley enormously high as compared with mine The dahri of Ramgarh is no doubt superior owing to the action of the Atria Bund, which ensures more regular flooding in Alwar, but I cannot believe that 24 maunds is an average chahi barley yield for Meo cultivators The Bhartpur yields are enormously high all round as compared with those of Gurgaon, and the soil must be remarkably good to produce crops giving such a high average yield The cotton, wheat and gram yields are almost incredible With all due deference to such an authority as Mr O'Dwyer I cannot help thinking that the Bhartpur and Alwar yields are too high, and it is a significant fact that in every case the net assets based on kind-rents largely exceeded the estimate based on cash-rents.

At the same time it must be admitted that the standard of Meo cultivation is much higher in Alwar and Bhartpur than in Gurgaon The high assessment, the solidarity of the village communities, and the absence of demoralizing influences, such as facilities for mortgaging and borrowing, combine to make the Meo a much more industrious cultivator in a Native State than in British India

Straw

As a share of the straw is always taken when the rent is batai, I have included the value of the straw in the Produce Estimate I have assumed the following cash-rates per maund for the straw.—

	Rs	a	p
Jowar and rabi cereals ..	0	3	0
All other crops of which the straw is shared	0	2	0

The outturn of straw is assumed to be equal to the outturn of grain in the case of all crops except jowar, bajra and wheat the outturn of jowar is assumed to be three times, of bajra twice and of wheat one-and-a-quarter times that of the grain.

Prices.

30 The sanctioned prices of the present settlement are given below in annas per maund and compared with those assumed at last settlement —

1	2	3	4	5	6	7	8	9	10	11	12	13
	Jowar	Bajra	Mung	Moth	Til	Cane	Cotton	Wheat.	Barley	Gram	Sarson	Taramira.
Prices at last settlement .	16	18	18	15	40		53	21	14⅓	16	27	17
Prices sanctioned now .	20	23	30	22	60	45	64	32	22	23	45	32
Rise per cent	25	28	67	47	50		21	52	52	44	67	68
Assumed by Mr O'Dwyer for tahsil Ramgarh	21	26	22		58		58	32	23	24	43	
Assumed by Mr O'Dwyer for Nothern tahsils, Bhartpur State	21	25	26				58	30	34	21	46	

Mr Channing's assumed prices were the average harvest prices of the twenty years 1854-1873, while those sanctioned now are based chiefly on the harvest prices of the last ten years extracted from banias' books, excluding years of scarcity , in both cases therefore they are the prices at which the zamindar actually disposed of his produce The prices now sanctioned are for the whole district The prices current in each tahsil are given in Statements III and IV of Mr Hamilton's report

Mr. Channing's prices were on the whole lower in Firozpur than in any other part of the district, and we should have expected the present prices to be ower than in the other tahsils which are much better off as regards communica-

tions. As remarked however by Mr. Hamilton we can only accept the fact that they are not. That the assumed prices are not too high is, I think, indicated by the comparison with Mr. O'Dwyer's prices, which are equal to, or higher than, our prices in the case of all important crops except cotton

The reason of the low price of cotton is not explained, and the Gurgaon price of this staple is fully justified by the data given in Statement III of the Preliminary Report on prices.

The all-round rise in prices according to the method employed by Mr. Hamilton in the Preliminary Report, which is in effect the same as that described in paragraph 376 of the Settlement Manual, is 39 per cent, or higher than anywhere else in the district

Wheat, cotton, oilseeds, and in the Bangar Circle cane, are the chief revenue-paying crops, and they only occupy about 17 per cent of the total area under crops. In this tahsil, where the Meos are thriftless and improvident, and are in the habit of speculating with their produce, where the pressure of population on the soil is severe, and where more than four-fifths of the crops are food crops, which in years of scarcity have to be bought from the bania at famine prices, the effective rise of prices cannot be very large, although as pointed out in previous reports the question of the effective rise of prices is not of much importance in this district where the assessment is based on cash rents.

Fodder crops

31. I propose to deal with fodder crops as in the Palwal Tahsil (Assessment Report, paragraph 30). Here also the kind rent data are so meagre that it is impossible to say what crops or portions of crops would, if batai rents were general, be appropriated by tenants before division I propose therefore, as in Palwal, to make no deduction of any kind from the landlord's share, but in estimating the value of the Government share to deduct those crops or portions of crops which are consumed for fodder and form part of the cost of production

The whole value of guar, chari, carrots and turnips, which are fodder crops pure and simple, as well as of all miscellaneous crops classed as fodder, will be deducted The straw which I have taken into account in framing my Gross Produce Estimate is nearly always consumed for fodder, and its value will therefore not be included in the Government share the above constitute the fodder supply proper, in years of scarcity, when the ordinary fodder crops prove insufficient, they are supplemented by portions of the food crops In this tahsil, where grazing is so scarce, the extent to which grain crops have to be cut for fodder is considerable Oilseeds and pulses are the crops most largely sacrificed, but a certain amount of jowar, barley and gram is also cut

I estimate the percentages as follows --

1	2	3	4	5	6
	Bangar	Bhuder	Dahar Mitha	Dahar Khari	Chiknot
Sarson	50	50	50	50	50
Pulses	33⅓	33⅓	33⅓	33⅓	33⅓
Jowar	12½	15	12½	15	15
Barley	5	5	5	10	10
Gram	5	5	5	10	10

In the Bhuder Circle the soil is light and in the Dahar Khari and Chiknot Circles grazing is exceptionally scarce, hence the jowar deduction is larger in these circles than in the others. Owing to the scarcity of grazing I have also made a larger barley and gram deduction in the two last named circles These deductions compare with the following deductions made by Mr. O'Dwyer in the Ramgarh tahsil of Alwar —

	Per cent
Rabi oilseeds, moth and masina	25
Roots	50
Jowar	10
Barley	5

In Alwar sarson and tara were not recorded separately Tara is never cut for fodder, and a deduction of 25 per cent from the total area under *rabi* oilseeds is equivalent to my 50 per cent deduction from sarson The other deductions agree fairly closely My gram deduction is supported by the testimony of the zamindars, who say that gram and barley are cut equally for fodder

Menials' dues and hired labour

32 In this tahsil, where the rents are in kind, the menials are invariably paid by the tenants Whether this would be the case if kind rents were the rule instead of the exception is doubtful, but it was the case at last settlement in all the tahsils with good soil, and as it is the case now no deduction can properly be made from the Produce Estimate on account of menials' dues In view however of the fact that more than half the land is cultivated by self-cultivating owners, who have to pay kamins' dues, allowance must be made in assessing

The only agricultural kamins are the khati (carpenter), lohar (blacksmith), and chumar (leather-worker), the last of whom helps to some extent in the field As it is not proposed to make any deduction on their account from the Produce Estimate it is unnecessary to state their dues in detail, but the percentages of the produce of each harvest which they absorb are as follows —

1	2	3
Circle	*Kharif*	*Rabi*
Bangar	4	14
Bhuder	44	17
Dahar Mitha	31	12
Dahar Khari	31	13
Chiknot	31	19
Total Tahsil	35	15

The Meo generally has a large family, and is much too poor to employ hired labour The only agricultural operations which are performed by hired labourers are the picking of cotton, the hoeing of sugarcane, and the making of *gur*

Cotton-pickers receive one-tenth of the pickings The cost of making *gur* is, as given in paragraph 20 of the Palwal Assessment Report, Rs 7-12-0 per acre, and the same share of the cost of hoeing may be allowed as in Palwal, *viz*, Rs 3 per acre With these exceptions the ordinary Meo zamindar never employs hired labour, and no allowance need be made on this account

Repair of wells

33 In tahsil Rewari I made a deduction from the landlord's share of chahi produce on account of annual repairs to the woodwork and the occasional cleaning of wells In this tahsil this expenditure falls on the tenant, and no deduction is therefore legitimate

Landlord's share of produce

34 The landlord's share of the produce on the various classes of soil was stated in paragraph 24, and is shewn in percentages in the following table —

Irrigated	Chahi ...	.. 33⅓
	Nahri ..	.. 50
Unirrigated . . .		. 50

As in the case of chahi and unirrigated crops, no further deductions have to be made, the Government share is half that of the landlord's. On nahri land the landlord pays half the cost of the seed and half the canal dues, and in the case of cotton he shares the cost of the picking, and in the case of cane the cost of cultivation, which is per acre as follows .—

	Rs	a
Cost of seed .	9	0
Share of cost of hoeing ..	3	0
Hire of press (including oil) ...	6	4
Pay and food of jhoka and tarna who prepare the *gur*	7	12
Total .	26	0

To avoid unduly complicating the Produce Estimate I have worked out separately the value per acre of the Government share of each nahri crop, and to obtain the total value of the Government share it is only necessary to multiply the area by the value per acre These rates per acre are obtained by working out the value of a matured acre of each crop (less fodder allowance, *vide* paragraph 31) at the yields assumed in paragraph 29 and the sanctioned prices given in paragraph 30 After deducting the value of the seed sown, the canal dues and the expenditure mentioned in paragraph 32, the Government share is one-fourth of the remainder.

The gross produce and half-net-asset estimates are worked out in detail in Statement XIII.

Before abstracting the results here it is necessary to make allowance in the Bangar Circle for the serious underestimate of kharaba alluded to in paragraph 28. In that paragraph I compared the recorded percentages of failed crops with what I considered they ought to be

I propose to deduct 4 per cent from the chahi, 12 per cent from the nahri and 10 per cent from the unirrigated crops on account of insufficient kharaba The resulting Jamas and rates are shown below —

1	2	3	4	5	6	7	8	9	10	11
Circle	Detail	Chahi irrigation	Nahri irrigation	Abi	Dahri	Barani	Total	Value of 4th gross produce	Present assessment	Increase per cent. of column 8 on column 10.
Bangar.	Matured area in acres	2,522	8,437		257	56,119	67,335			
	Value of gross produce	46,748	1,26,607		3,468	4,64,094	6,41,112			
	Half net assets	6,614	14,594		675	89,703	111,586	1,06,852	79,661	40
	Rate per acre	2-10-0	1 12 0		2 10-0	1-10 0	1 10-0			
Bhudar.	Matured area in acres	2,448		44	609	32,199	35,300	..	.	
	Value of gross produce	56,556		568	8,832	2,40,763	3,06,719	...	.	
	Half net assets	8,058		118	1,768	45,716	55,650	51,120	44,420	25
	Rate per acre	3-5-0		2-9-0	2-14-0	1-7-0	1-9-0			
Dahar Mitha	Matured area in acres	1,755	..	.	1,570	19,675	23,000			
	Value of gross produce	44,535			25,788	2,15,302	2,85,625	.		
	Half net assets	6,308			5,476	41,795	53,579	47,604	47,276	13
	Rate per acre	3-9 0			3 8-0	2-2-0	2 5 0			
Dahar Khari	Matured area in acres	873		849	38	17,238	18,493			.
	Value of gross produce	21,080		5,704	478	2,23,544	2,49,812			
	Half net assets	2,860		1,160	97	42,658	46,775	41,635	37,411	25
	Rate per acre	3 4 0	.	3 5-0	2 15 0	2 8 0	2-8 0			
Chikwor	Matured area in acres	58	.	193	128	7,334	7,713		..	
	Value of gross produce	970		3,428	2,000	79,964	86,362		.	.
	Half net assets	135		768	403	14,882	16,188	14,394	14,151	14
	Rate per acre	2 5	..	4-0-0	3-2 0	2-0-0	2 2 0			
Total Tahsil.	Matured area in acres	7,656	8,437	586	2,597	1,32,565	1,51,841			
	Value of gross produce	1,69,890	1,26,807	9,700	40,566	12,22,667	15,69,630		..	..
	Half net assets	23,970	14,594	2,041	8,419	2,34 754	2,83,778	2,61,605	2,22,919	27
	Rate per acre	3 2 0	1 12 0	3 8 0	3-4-0	1-12 0	1-14 0			

It will be observed that in all circles the half-net-assets are considerably higher than the value of one-sixth of the gross produce This is due to the high rate of batai of unirrigated crops As I pointed out in paragraph 24, there can, I think, be little doubt that a rate of one half is too high for all except the best barani land, and the proper rate lies between one-half and one-third, and should probably be two-fifths, as taken by Mr O'Dwyer in Alwar

In the Dahar Mitha Circle the estimate seems unduly low, and this is due probably to the fact that the cropping is unrepresentative There ought to be a much larger area under dahri crops (*vide* paragraph 22), and the chahi cropping is somewhat below the average (*vide* comparative statement in paragraph 8) In this circle also the yields may perhaps have been somewhat underestimated

In the Dahar Khari Circle the chahi cropping is, as noted in paragraph 8, considerably above average, but the dahri cropping is much below average, and the total result is probably a correct estimate

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CHAPTER VI—HALF-NET-ASSETS BASED ON CASH RENTS.

Deductions and half net-assets rates

35 The results of the examination of cash rents have been described in paragraph 26 It only remains to decide what share of the corrected rents may be taken as equivalent to half the net assets In the Palwal Assessment Report (paragraph 34) I pointed out that in using cash rents we can either take the average realisations of a term of years (if available), or the rent demand of a single year, and that if we took the former we should find that we had to make an allowance for the expenses of management, while if we took the latter, we should have to allow for non-realisations, for land which goes out of cultivation or is not let regularly every year, and for fluctuations in the rent rate In this tahsil unfortunately there are very few villages owned by non-cultivating owners who take cash rents, and we are therefore unable to take average realisations as the basis of our cash rent net assets, and have to fall back on the cash rent demand of the year of measurement The rates given by these rents after correction are detailed in paragraph 26, and we have to consider what deduction must be made from them on account of non-realisations &c. In the Rewari tahsil I made a deduction of 5 per cent on this account and in the Palwal tahsil of 12 per cent, but the Meo is a very different tenant from the Ahir or Jat, and I do not think there can be any doubt that in this tahsil the percentage of unrealised rents is much larger than in Rewari or Palwal It varies of course with the pitch of the rents and with the security of the cultivation I think a deduction of 15 per cent ought to be made in the Bangar, Dahar Mitha and Chiknot Circles, of 10 per cent in the Bhuder Circle, where the soil requires very little rain to mature a moderate crop, and of 30 per cent in the Dahar Khari Circle In the last circle rents are so high that I am convinced that they cannot be realised at all fully over a series of years These percentages are below what is indicated by the very meagre evidence as to realisations which is obtainable In the Dahar Mitha circle the whole of the village of Doha is cash rented the percentage of realisations during the ten years 1896-97 to 1905-06 is only 71, but the tenants are the dispossessed proprietors, who have always been at feud with the owner by purchase, and further, in 1900-01 the rents, which were already high, were raised to a pitch which justifies them being characterized as rack rents During the four years previous to 1900-01 realisations averaged 80 per cent of the demand, and as these years were below average, I have assumed that over a series of years 85 per cent of the demand would be realised In the Dahar Khari Circle a Meo owns nearly the whole of two villages and half of a third The average demand of his rents in these three villages during the last ten years amounts to Rs 1,494 while realisations only average Rs 989, or 66 per cent. of the demand the owner however is careless, the villages are not well managed, and the percentage of non-realisations must be above the average, though, with the very high rents taken in this circle, it is no doubt large, and my estimate of 30 per cent is probably moderate

Beyond the deduction of these percentages the rates as they stand require no alteration except in the Dahar Mitha and Chiknot Circles In the former I propose to take the Magda rate (Rs 4-6-0) as the average barani rate for the reasons given in the paragraph 26

In the Chikmot Circle there are so few rents that a reliable cash rent estimate cannot be framed. The rents are only on chahi and barani, and in the former case the rent is too low and in the latter case too high, as it is on the best land To obtain an estimate the best we can do is to apply the customary rate (Rs. 2 per bigha pakka, *vide* paragraph 26) to the cultivated area This rate is too low for chahi, abi and dahri, but this is counterbalanced by the fact that it is too high for bhur, and it is on the whole a fair all round rate for the circle.

After making the above alterations, and deducting the percentages for non-realisations the half-net-asset rates and jamas are as follows —

1	2	3	4	5	6	7	8	9	10	11
Circle	Detail	Chahi	Nahri.	Abi.	Dahri	Barani	Bhur	Total cultivated	Present assessment	Increase per cent.
BANGAR.		Rs a p	Rs a p	Rs a. p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	
	Rate ...	1 12 6	1 12 6	.	* ..	1 9 6	0 12 6	1 9 5		
	Area	5,690	10,675		754	45,941	4,147	67,207		
	Amount Rs	10,135	19,015		.	74,420	3,240	1,06,810	79,661	34
BHUDER	Rate .	2 9 0		2 12 0	2 8 0	1 10 0	0 14 0	1 5 4		
	Area ..	4,807	..	82	943	10,592	22,400	38,824		
	Amount	Rs 12,318	.	Rs 226	Rs 2,357	Rs 17,212	Rs 19,600	Rs 51,713	44,420	16
DAHAR MITHA	Rate . .	Rs a. p 3 4 6	...	.	Rs a p 2 15 0	Rs. a p 1 13 9	Rs a. p 1 0 6	Rs a p 2 2 7		
	Area	4,491	..		4,364	12,531	4,113	25,499		
	Amount	Rs. 14,736			Rs 12,819	Rs 23,300	Rs 4,242	Rs 55,097	Rs 47,276	17
DAHAR KHARI	Rate ...	Rs a. p 2 8 0		Rs a p 2 8 0	Rs a, p 2 5 0	Rs. a p 2 4 0	Rs a p 1 15 0	Rs a p 2 0 0		
	Area . . .	1,762		614	875	15,617	3,029	20,897		
	Amount	Rs 4,405		Rs 1,343	Rs. 2,024	Rs. 35,138	Rs 3,931	Rs 46,841	Rs 37,411	25
CHIKMOT	Rate ..							Rs a 1 6 0		
	Area	52		361	152	10,182	336	11,033		
	Amount ..							Rs 15,170	Rs 14,151	7

* Included in barani

The *abi* and *dahri* areas in all circles are not the areas in Statement II but the areas as finally fixed (*vide* paragraph 7), and the *barani* area has been modified accordingly.

It remains to compare the cash rent estimates with those based on kind rents and detailed in the preceding paragraph In the Bangar and Bhuder Circles the half net-assets by cash rents are lower than those based on kind rents, and in the Dahar Mitha Circle they probably would be lower if the produce estimate were reliable which, as I have already pointed out, I do not think it is The reason seems to be that in these three circles the rent rate of one-half is too high, and the one-sixth-gross-produce estimate which in the two first named circles agrees very closely with the cash rent estimate is more reliable In the Dahar Khari Circle the two-half net assets estimates agree almost exactly, and this is what we should expect as a *batai* rate of one-half is not too high for the fertile semi-dahar soil of this circle In these four circles the cash rent estimate may, I think, be accepted with confidence as the true half-net-assets, as where the kind rent estimate differs from it, it is due to the causes which I have just enumerated.

In the Chiknot Circle we must, on the other hand, make kind rents our principal guide, and here again the one-sixth-gross-produce-estimate is much more reliable than the half-net-assets based on batai as a batai rate of one-half is obviously much too high for the extremely precarious soil of this circle. Though the cash rent estimates is little better than a guess, it may be noted that it agrees almost exactly with the one-sixth-gross-produce-estimate if we raise the latter by 6 per cent, which is the extent to which the produce of the selected years is below the average of the last 21 years (*vide* Statement X).

Expressed in round numbers the following sums are what I take to be the true half-net-assets in each circle.—

	Rs
Bangar	1,07,000
Bhuder	52,000
Dabar Mitha	55,000
„ Khari	47,000
Chiknot	15,200

PART II.—FISCAL AND MISCELLANEOUS.

CHAPTER I.—FISCAL HISTORY

First Regular Settlement

36. Of the 244 villages of this tahsil 194 belonging to the parganas of Firozpur and Punahana were conferred in jagir by Lord Lake on Nawab Ahmad Bakhsh Khan, but were forfeited in 1835 owing to the instigation by his son, Shamas-ud-din Khan, of the murder of Mr Fraser at Delhi.

The net average collections of the last 20 years of the jagirdar's management amounted to Rs 2,25,700 out of an average demand of Rs 2,45,700. The parganas were summarily settled between 1835 and 1837 by Mr C. Gubbins for Rs. 2,25,591, and in the following year the first Regular Settlement was concluded by that officer's brother, Mr M. Gubbins Reductions on the Summary Settlement jamas were allowed at once, while the enhancements took effect from the expiry of the terms fixed at the Summary Settlement The assessments were as follows.—

1	2
Jama of 1246 fasli (first year of Revised Settlement)	Final jama attained in 1256 fasli
Rs 2,22,218	Rs 2,33,264

In 1841 Mr Gubbins reported that his assessment was too severe, and in accordance with his representations it was reduced to Rs 1,84,908. Twelve villages were subsequently added to the tahsil from pargana Nuh and 12 from pargana Hathin, Their assessment, Rs 18,176, raised the total assessment of the tahsil as then constituted to Rs 2,03,084.

The first Regular Settlement worked well, and in 1875 Mr Channing wrote, "although the settlement presses rather heavily on individual villages, and although, as I hope to show, in one circle, Chak Mandikhera, some reduction of assessment is in justice required, yet the present assessment has on the whole worked well Transfers by sale have been very few, mortgages are not, except in a few instances, oppressive, and the revenue has been regularly and easily collected."

Second Regular Settlement

37 The Second Regular Settlement was begun in 1872. Mr Channing joined as Assistant Settlement Officer in 1873 and remained in charge of the settlement operations until the end of 1877, by which time all the actual assessment work was completed Mr. Channing found that population had increased 52 per cent, cultivation 34 per cent, and that there had been a considerable rise of prices. On the other hand well irrigation and natural flooding had both decreased

The instructions on which the assessment was to be based are contained in Section 121 of the Final Settlement Report The demand was not to exceed the estimated value of half the net produce ordinarily receivable by the landlord either in money or kind These instructions introduced a new and reduced standard, hitherto the Government share of the net assets had in theory amounted to two-thirds though in practise the pitch of the summary and first regular assessments was determined by the average collections of the jagirdar. In any case it was probably above the half-net-assets.

The processes by which Mr Channing's rates were framed are detailed by him in Section 141 of the Settlement Report He was unable to derive any substantial assistance from cash rents, as the villages in which competitive cash rents existed were extremely few, and his assessment was based almost entirely on his estimate of the produce, one sixth of which he took as his standard.

The estimates of yields were, as I have stated in paragraph 29, rather high, and as the barani yields were applied to the whole cultivated area, the value of the produce was probably somewhat over estimated. The total value of the gross produce of the tahsil as then constituted was Rs 15,16,164 and the proposed assessment Rs 2,40,739, or 95 per cent of the one-sixth gross produce

As in Palwal Mr Wood thought that the proposed rates were too lenient, but they were eventually passed without alteration Mr. Channing however found himself unable to assess fully up to his rates, and the jama as finally announced was Rs 10,000 less than the jama proposed

The following table shows the results of the re-assessment in each of Mr. Channing's circles (excluding the fifteen villages transferred from Nuh at the end of the settlement) —

1	2	3	4	5	6	7
	Punahana	Bhuder	Landoha	Mandikhera	Chiknot.	Total Tahsil
	Rs	Rs.	Rs	Rs		Rs
Value of one sixth gross produce	89,533	53,692	50,420	27,217	31,832	2,52,694
Existing Jama	56,120	44,439	47,852	31,500	23,006	2,02,917
Jama proposed	78,582	50,573	53,651	26,935	30,998	2,40,739
Jama sanctioned	76,123	48,990	51,526	27,884	25,958	2,30,481
Increase per cent	+36	+10	+8	—11	+13	+12

The assessment of the 15 villages transferred from Nuh at the end of settlement amounted to Rs 8,030, thus bringing the total assessment of the tahsil up to Rs 2,38,511

The general aspects of the breakdown which followed the famine of 1878 have been discussed in the Assessment Reports of Rewari and Palwal, and need not be referred to here Owing to the character of the Meo the breakdown was worse in the Mewat than in other parts of the district The assessment of Tahsil Firozpur is examined circle by circle in paragraph 61 (Section 6—11) of Mr Wilson's Revision Report, and the following temporary and permanent reductions were granted —

1	2	3c	4	5	6
	Bangar	Bhuder	Dahar itha	Dahar Khari	Chiknot
Permanent	4%	8%	7%	3%	5%
Temporary	10%	9%	6%	2%	8%

The percentages of temporary reductions shown here are less than those given by Mr Wilson in Appendix VI of the Revision Report Mr Wilson's figures include reductions due on land in the possession of mortgagees, to whom as a matter of fact no reduction was allowed This explains the small percentage of temporary reductions in the Dahar Khari Circle, which in 1883-84 was almost as heavily involved in mortgage as it is now

The total permanent reduction for the whole tahsil amounted to Rs 12,040, or 5½ per cent of the jama, and temporary reductions amounting to Rs 18,079 were granted for seven years on the understanding that at the end of that period the Deputy Commissioner should decide how much of the original assessments should be re-imposed Between 1883-84 and 1889-90 the seasons were generally favourable and the condition of the tahsil greatly improved At the end of the seven years Rs 2,653 of the amount for which temporary reductions were granted were remitted permanently and Rs 15,426 re-imposed The total amount therefore by which Mr Channing's assessment was finally reduced was 6½ per cent

The following statement shows the fixed jama of the tahsil at the various periods alluded to and in 1905-06 —

1	2	3	4
Period	Jama	Incidence on cultivation	Remarks
	Rs	Rs a p	
Summary Settlement	2,25,591		194 villages only
1st Regular Settlement ...	2,03,174	1 11 5	229 do
2nd ditto ditto ...	2,38,511	1 7 2	244 do
1883 84	2,00,717	1 5 2	
1889-90 .	2,22,970	1 6 8	
1905-06	2,22,919	1 5 10	

Details of the fluctuating assessment imposed on cultivation in the Kotla Basin will be found in Statement XVI.

Working of the expiring Settlement since 1889

38. The revised assessment worked well and the demand was paid with ease between 1890 and 1895, when the long series of bad seasons began, which continued up to 1905-06 1895-96 and 1898-99 were poor years, while 1899-1900 was a famine year.

A recovery was made in 1900-01, but another series of poor rabis was followed by a serious failure of the kharif and rabi harvests of 1905-06 in the Dahar and Chiknot Circles. In the Bangai and Bhuder Circles the harvests of that year were nearly average These two circles have suffered very much less from the recent bad seasons than the Dahai Circles In both the kharif is the chief harvest and in the Bangai Circle the canal and in the Bhuder Circle the lightness of the soil have enabled a large area to mature in spite of the scantiness of the rainfall. The Dahar and Chiknot Circles on the other hand—especially Chiknot—have suffered severely from the bad seasons, and in the fodder famine which lasted from August 1905 to April 1906 it is estimated that 75 per cent of the cattle of the tahsil perished. Owing to the scarcity of grazing the Mewat always suffers more severely in a fodder famine than the rest of the district.

The kharif harvest of 1906 was good, and the rabi harvest of 1907 exceptionally good, and these two harvests have much improved the condition of the tahsil, but a succession of good or average seasons is still required to restore the villages to their condition in 1895.

The following statement shows the suspensions, remissions and collections of revenue during the last 21 years in percentages on the average khalsa demand —

Year	Suspensions						Remissions						Collections						
	Bangar	Bhuder	Dahar Mitha	Dahar Khari	Chiknot.	Total.	Bangar	Bhuder	Dahar Mitha	Dahar Khari	Chiknot.	Total	Bangar	Bhuder	Dahar Mitha	Dahar Khari	Chiknot		Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		19
1885-86			1 7			4							101 3	96 7	98 8	108 8	Fixed	102·2	101 2
																	Fluctuating		
1886-87					..								93 0	93 1	97·0	99 3	Fixed	93 0	94 9
																	Fluctuating	5 1	5 1
1887-88		6				1							91 4	92 7	95 1	97 2	Fixed	93 9	93 6
																	Fluctuating	12 2	12·2
1888-89			·2			03	4				..	1	91 5	93 9	95 4	97 3	Fixed	94 0	93 9
																	Fluctuating	49 0	49·0
1889-90	1 9	1·7	6 1	5 2	2 9	3 4							99 5	99 9	95 1	95 3	Fixed	98 7	97 9
																	Fluctuating	315 7	315 7
1890-91		•											102 4	102 4	105 4	104 4	Fixed	103 3	103·4
																	Fluctuating		
1891 92													102·4	102·7	102·7	102 1	Fixed	102 7	102 5
																	Fluctuating		
1892-93		2				05		•					101 9	101 6	101 3	100·5	Fixed	101 5	101 4
																	Fluctuating	621 3	621 3
1893-94			•										101·9	102 1	101 2	100 5	Fixed	101 5	101 5
																	Fluctuating	126 9	126·9
1894-95													102 1	101·9	101 2	100 5	Fixed	101 5	101·6
																	Fluctuating	91 8	91 8
1895 96	03				23 5	1 5							102 0	101 9	101 2	100 5	Fixed	78 0	100·0
																	Fluctuating	35 1	35 1
1896-97			6	1 4	19 4	1 6						•	102 1	102·0	100 5	99 1	Fixed	88 0	100 3
																	Fluctuating	88·7	88 7
1897 98	•											..	102·1	102 0	101 8	101·9	Fixed	132 3	103 9
																	Fluctuating	211 9	211 9
1898 99	1 1	7	6	4	19·9	2 0						..	100·0	101 1	100·0	100·0	Fixed	82 3	99 5
																	Fluctuating	52 2	52·3
1899 1900	50 9	29 4	31 9	57 5	97 2	46 7						•	51 1	72 7	69 5	42 5	Fixed	5 2	5·3
																	Fluctuating	1	1
1900-01									•			•	129 5	119 3	117 8	128·8	Fixed	124 2	124 5
																	Fluctuating	141 0	141·0
1901-02	9 6	24 8	38 6	27 7	54 5	24·7	20 0	19 5	28 8	44·2	130 2	36 1	88 2	70 0	62·6	85 0	Fixed	16 1	74·0
																	Fluctuating	32 8	32·8
1902-03	2 5	8 1	16 6	8	29·6	8 1		..					106 1	101 1	89 2	106 7	Fixed	73 4	99·6
																	Fluctuating	117 0	117·0
1903-04	9 9	13·1	15 1	5 5	18·9	11 5			1 3		•	3	93 1	88 8	85 8	98 3	Fixed	83 1	91 0
																	Fluctuating	71 6	71 6
1904-05		..	•										113 5	122 5	120 3	122 0	Fixed	121 5	118 7
																	Fluctuating	87·5	87 5
1905-06	57·2	52 8	46 7	45 5	87·0	54 1	5	3 1	12·7	13 2	61 8	9·7	45 0	48·6	54 5	55 3	Fixed	14 5	47 5
																	Fluctuating	20 7	20·7

The remissions in 1901-02 were on account of the Coronation, and in 1905-06 were of sums outstanding for more than three years. The amount under suspension at the end of Rabi 1907 was as follows —

1	2	3	4	5	6	7
	Bangar	Bhader.	Dahar Mitha	Dahar Khari	Chiknot.	Total
	Rs	Rs	Rs	Rs	Rs	Rs
1 On account of previous years	2,570	5,866	9,309	2,143	2,631	22,519
2 On account of 1905-06	44,278	23,238	21,698	16,881	12,125	1,18,220
3 Total ...	46,848	29,104	31,007	19,024	14,756	1,40,739
4 Proposed for recovery with rabi instalment of 1907	10,346	7,002	8,222	5,832	2,075	33,477
5 Proposed for remission (Rabi 1907)	845	5,304	6,974	109	.	13,232
6 Total proposed recoveries and remissions	11,191	12,306	15,196	5,941	2,075	46,709
7. Balance outstanding	35,637	16,798	15,811	13,083	12,681	94,030

All unrecovered balances existing when the new demand is announced should be remitted

CHAPTER II.—MISCELLANEOUS.

Gross produce and consumption.

39. The total population at the last census was 1,32,287. Separate figures for the children of each tahsil are not available, but adopting the average of the whole district the population may be classified as follows :—

1	2	3	4
Detail.	Males	Females	Children under ten (excluding infants)
Urban	8,312	7,632	3,816
Rural	42,158	38,160	19,080
Total .. .	50,470	45,702	22,896

Infants have been estimated to number 10 per cent. of the total population. The simple diet of the zamindars of this district is described in the corresponding chapter of the Rewari report I do not think that over a series of years there would be any difference between the diet scale of this and the Rewari and Palwal Tahsils

The Meo is not nearly such a hard worker and probably eats less food, but, as cattle are so scarce, milk probably forms a smaller item in his diet, and he has to consume more grain food.

I therefore adopt the same diet scale as in Rewari and reproduce it for reference below —

1	2	3	4	5	6	7
	Males		Females.		Children	
	Chataks per diem	Maunds per annum	Chataks per diem	Maunds per annum	Chataks per diem	Maunds per annum
Urban	10	5¼	8	4½	6	3½
Rural	12	7	9	5	6	3½

The total annual consumption is therefore 6,48,180 maunds

The yield of food grains is given in the detailed produce estimates, and the tahsil totals in maunds, after making the fodder allowances detailed in paragraph 31, are as follows —

Jowar	65,284	Chaula	1,589
Bajra	1,70,256	Wheat	12 484
Maize	2,520	Barley	1,67 150
Mung	6,729	Gojra	17 197
Mash	1 195	Gram	1,11 295
Moth	7,826	Gochni	16 764

I have estimated the yield of the fluctuating cropping at the dahri yields of the circle

I show below in the case of each crop the amount of seed sown per acre, the percentage of the sown area which fails and the resulting deduction to be made on account of seed In estimating the percentage of failure the proportion of irrigation must be kept in mind The total amount of seed sown is obtained by increasing the total matured area under each crop (Statements VIII and IX) by the percentage in column 3 and multiplying the result by column 2.

For conversion into flour the following deductions should be made —

Jowar, Bajra, Maize } 1¼ per cent

Barley 10 per cent

Wheat, Pulses, Mixtures } five per cent

The total amount of converted food grains is therefore as follows —

1	2	3	4	5	6
Crop	Seed sown per acre in sers	Percentage of failed to sown area	Total amount of seed sown in maunds	Net produce in maunds	Net produce in maunds after conversion into flour
Jowar	8	25	3,394	61 890	61 116
Bajra	3	25	4,007	1,75 218	1,71 057
Maize	8	20	05	2 425	2,395
Mung	3	25	284	6,445	6,123
Mash	3	25	51	1,144	1,087
Moth	5	25	207	3,619	3,438
Chaula	2	25	68	1,512	1,437
Wheat	50	20	7,870	34,654	32 950
Barley	50	20	25,084	1,12 366	1,28,129
Gojra	50	20	3,025	11 172	15 463
Gram	25	21	14 549	1,16,749	1,10,912
Gochni	40	22	7,348	38,956	37,008
Total			65,912	5,99,210	5,71,115

There appears therefore to be a deficiency of food grains amounting to about three-quarters of a lakh of converted maunds, but the total includes 83,421 maunds of wheat, gojra and gochni which are more valuable than bajra and barley, the staple food grains, and the exchange of the former grains for the latter would represent an addition of about 20,000 maunds to the total Further the produce in Statement XIII is 3 per cent below the average of the last 21 years and as I pointed out in paragraph 34 the produce of the Dahar Mitha Circle is unduly low In this circle the Government share is probably about Rs 5,000 less than it ought to be, which equals roughly a gross deficit of Rs 30,000, which sum may be taken to represent about 20,000 maunds of barley and bajra flour On the above facts we are justified in adding about 60,000 converted maunds to our total of Rs 5,71,115 This leaves a small deficit, but we have still to take account of the fact that owing to the bad seasons not only is the produce 3 per cent below average for the whole tahsil, but in the Dahar Khas and Chiknot Circles it is much more and the character of the seasons has entirely altered the character of the cropping In normal years the area under wheat, gojra and gochni in these circles would be much larger.

I think it may be assumed that over a series of years the food grains are a little more than sufficient to feed the people, though in view of the severe pressure of population on the soil in parts of the tahsil I do not think we can expect to find much excess of production over consumption.

After deducting one-half of the gross value of the sugarcane and sarson and one-tenth of the gross value of the cotton, the value of the non-food and miscellaneous crops (including those in the fluctuating area) is about Rs 3,10,000 to which must be added something on account of excess production of food grains As the present khalsa demand with cesses and canal dues amounts to Rs 2,83,987, this estimate leaves very little margin for clothing and the other necessaries of life, and cannot be accepted as correct I have already pointed out the very serious decrease of the area under cotton in recent years due to the scantiness and lateness of the rains, and a considerable addition must be made to the estimate on this account. Possibly also the fodder deductions are excessive and the net produce of food grains is too small However, I think the above facts illustrate clearly the extreme poverty of the tahsil, and explain why the people are unable to tide over even one bad year In a good year the value of the produce is very much greater than my estimate, and the people of the tahsil, over-populated as it is, are able to feed themselves, pay their revenue and live comfortably, but in a bad year the value of the produce is insufficient for these purposes, and in such years it is fatal to attempt to collect from the Meo the revenue which the thrifty Ahir or Jat would be able to pay out of the surplus of good years My figures if correct seem to indicate the necessity for a substantial reduction of assessment, but in the Mewat a large reduction would be useless, and what is indicated is exceptionally careful revenue management, revenue being liberally suspended in bad years and collected again in good years

PART III.

CHAPTER. I—PROPOSED ASSESSMENTS.

Summary of statistics

40 The leading statistics bearing on the assessment are summarised in the following table —

1	2	3	4	5	6	7
	Bangar	Bhuder	Dahar Mitha	Dahar Khari	Chiknot	Total
Percentage of cultivated to total culturable area.	97	98	97	99	93	97
Decrease of cultivation per cent.	8	4	1 7	3	5 4	11
Percentage of chahi irrigation to total cultivation	4	7	8	3	3	5
Percentage of dahri irrigation to total cultivation	13					5
Increase of irrigation per cent	1,175	28	43	8	256	217
Percentage of abi and dahri to total cultivation — Settlement	1	6	31	29	47	14
Percentage of abi and dahri to total cultivation — Now	1	2	18	7	4	5
Percentage of superior barani to total cultivation	69	26½	54	70	57	56
Percentage of bhur to total cultivation	6	58	16	10	3	20
Increase per cent of wells in use (excluding dhenklis)	196	70	90	66	266	92
Increase per cent of laos in use	255	86	86	69	450	120
Percentage of sweet wells (excluding dhenklis)	53	66	72	37	62	60
Average depth to water of pakka wells in feet	30	29	21	13	18	24
Average depth of water in pakka wells in feet	29	18	18	11	15	19
Average area irrigated per pakka lao in acres	3	3	4	2	3	3
Increase or decrease per cent of bullocks (excluding bulls)		+9	—12	—15	—33	—3
Increase or decrease per cent. of ploughs	+2	+15	—5	—17	—34	—1
Cultivated area per plough in acres	16	16	17	17	27	17
Increase or decrease per cent of population	+32	+9	+18	—5	—14	+16
Incidence of rural population per square mile of cultivation	517	468	491	465	295	478
Average area in acres per owner	7	9	9	6	6	8
Net area available for profit per owner	5	6	6	4	4	5
Percentage of cultivated area sold since settlement	1	5	14	5	2	4
Average sale price per acre in rupees	111	43	20	116	50	48
Percentage of cultivated area under mortgage	29	27	37	53	47	34
Average consideration money per acre in rupees	49	42	37	58	38	46
Amount of unsecured debt in rupees	2,48,396	1,24,250	98,767	89,088	31,186	5,91,687
Percentage on land revenue (1905 06)	312	280	209	238	217	265
" of matured to cultivated area—						
Irrigated	67	51	39	50	112	59
Abi and dahri	7	49	51	15	20	26
Superior barani	121	106	109	101	89	119
Bhur	93	95	112	120	56	98
Total	100	91	90	88	68	93

1	2	3	4	5	6	7
	Bangar	Bhuder	Dahar Mitha	Dahar Khari	Chiknot	Total
Percentage of failed to matured crops—						
Irrigated	3	8	11	13	41	6
Unirrigated	24	31	36	33	37	30
Percentage of area cultivated by owners	65	54	52	55	61	59
,, of tenants-at-will paying cash rents (not being at revenue rates)	13	19	31	21	6	18
Increase per cent of prices .	..	..			..	39
	Rs	Rs	Rs	Rs 59,049		Rs
Half-net-assets of last settlement (one-sixth gross produce for 229 villages)	89,533	53,692	50,420			2,52,694
Half net-assets of present settlement (244 villages) by kind rents	1,11,586	55,650	53,579	46,775	16,188	2,83,778
				Rs 62,963		
Half-net-assets by cash rents ...	1,06,810	51,713	55,097	46,841	15,170	2,75,631
				Rs 62,011		
Value of one-sixth gross produce of present settlement.	1,06,852	51,120	47,604	41,635	14,394	2,61,605
				Rs 56,029		
Present fixed assessment ..	79,661	44,420	47,276	37,411	14,151	2,22,919

As already stated in paragraph 7 the apparent increase in wells in use, laos and irrigation must be taken for what it is worth There probably has been an increase to make up for the serious decrease of flooding.

In giving the value of the one-sixth gross produce as estimated by Mr. Channing I have grouped the Mandikhera and Chiknot Circles together, as, owing to the transfer of six villages from the present Chiknot Circle to Dahar Khari, the present and former circles do not correspond The difference in the number of the villages affects the Bangar Circle only, as all except one of the 15 villages transferred to the tahsil are in that circle.

The bearing of the above statistics on the assessment will be discussed circle by circle

Method of assessing Meos

41. Before detailing my assessment proposals for each circle I wish to make a few general remarks about the method to be adopted in assessing the proprietary body of this tahsil. Enough has been said to indicate the improvidence of the Meo and the severe pressure of population on the soil The combination of these two factors renders the problem of assessment an extremely difficult one The former makes a full assessment combined with a careful and elastic revenue management theoretically desirable, while the latter makes the adoption of this course very difficult The problem is how to impose an assessment light enough to leave a fair margin for comfort and the necessaries of life and at the same time not so light as to demoralize the people. In assessing the various circles I have tried to keep this principle in mind

Bangar Circle.

42. This circle contains 103 villages, and comprises the former Punahana Circle and 14 out of the 15 villages transferred from Nuh at the end of last settlement

The striking feature of the statistics in the preceding paragraph is the area under canal irrigation which now protects 18 per cent of the cultivated area In consequence this is the most secure circle of all, and we find that 102 per cent of the cultivated area produces matured crops, though some deduction must be made from this very high percentage on account of the underestimate of failed crops alluded to in paragraph 28 With regard to the large increase of wells and laos in use and of the area irrigated from wells I must refer to the remarks in paragraph 8.

There has, however, been a large increase in the total number of masonry wells and a corresponding increase of irrigation may be presumed Ploughs and bullocks have increased slightly and population largely The area sold is very small, and the area mortgaged is not large for Meos The settlement jama, though a large increase, amounted to a lower percentage of the half-net-assets in this circle than in any other, and with the reduction given at the revision may be said to have been very light Prices have risen largely and the opening of the Agra-Delhi-Chord Railway, which passes within a few miles of this circle, has very much improved communications The above facts all indicate a considerable increase of assessment On the other hand the owners have always been lightly assessed, and are in consequence somewhat demoralized, and their cultivation compares very unfavourably with that of their more heavily assessed fellow tribesmen in the other circles Any increase of assessment which is taken must be a moderate one, and must be justified by an increase of resources This practically confines the increase to the nahri villages, as most of the barani villages, though lightly assessed, are not in a position to pay much more than they are paying at present

I compare below Messrs Channing's and Wilson's rates and jamas with the rates and jamas based on kind and cash rents —

1	2	3	4	5	6	7	8	9
	Chahi	Nahri	Dahri	Chiknot and Narmot	Magda	Bhur	Total cultivation	Jama
	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	Rs
Mr Channing	2 8 0		2 2 0	1 4 0	1 1 0	0 14 0	1 3 10	83,971
„ Wilson	1 11 0		1 8 0	1 4 0	1 0 0	0 8 0	1 3 1	80,658
Kind rents							1 10 7	1,11,586
Cash rents	1 12 6	1 12 6		1 9 6	1 9 6	0 12 6	1 9 5	1,06,810

Mr Channing's rates are for the 89 Punahana villages only, as his rates in the villages transferred from Nuh were various Mr Wilson left Mr Channing's loam rates untouched and obtained his reduction by reducing the rates on chahi, dahri and bhur, all of which soils were considerably overassessed

The present assessment is Rs 79,661 and the increases given by the kind and cash rent jamas, respectively, are 40 and 34 per cent

The first point for decision is the method of assessing canal lands as to which I would refer to paragraph 41 of the Palwal Assessment Report The reasons for a fixed assessment of canal lands are if anything stronger in this tahsil than in Palwal There are not likely to be any material reductions of the existing supply, and, even if reductions are made, the difference between the value of barani and nahri land after allowing for canal dues is so small that a reduction of the water supply would not make the proposed assessment press heavily on the villages affected It is true, as I stated in paragraph 8, that small extensions of irrigation are to be undertaken in the near future, but these can if necessary be provided for by rules similar to those proposed for the Palwal Tahsil, though, as the net profits of canal irrigated land are not much larger than those of barani, the interests of Government would not suffer much if these profits remained untaxed during the currency of the new settlement The area irrigated by "lift" is very small, and for the same reasons as in Palwal (*vide* paragraph 41 of the Palwal Assessment Report) I do not propose to make any difference between the rates on "flow" and "lift" In paragraph 3 of this report I described the Lohinga Valley Canal and the Shakrawa and Shahchoka Bunds The statement at the end of that paragraph shows that up to 1896-97 there was a good deal of flooding and a fairly large income from abiana, but that since that year not a single acre has been irrigated I have given reasons for holding that there is not likely to be any overflow from the Nuh Tahsil in the future, and it is therefore useless to classify any part of the area formerly irrigated as abi, but, as it is impossible to foretell what the result of a return to normal seasons will be, a fluctuating rate per matured pakka bigha should be maintained and levied in addition to the barani rate whenever there is any flooding in this area.

The fixed rates which I propose are—

1	2	3	4	5	6	7
Soil	Rate	Area in acres	Demand	Total	Incidence	Remarks
	Rs a p		Rs	Rs	Rs a p	
Chahi	1 9 0	5,690	8,891			Nahri includes chahi-nahri, and the superior barani class includes the area classed in Statement II as abi
Nahri	1 9 0	10,675	16,680			
Dahri	1 9 0	754	1,178			
Chiknot Narmot Magda	1 4 0	45,941	57,426			
Bhur	0 10 0	4,147	2,592	86,767	1 4 8	The dahri area is that given in paragraph 7

This is an increase of 9 per cent on the present assessment and amounts to 81 per cent of the half-net-assets (which may be taken to be Rs 1,07,000), and to between $\frac{1}{7}$th and $\frac{1}{8}$th of the gross produce This is a light assessment, but it is not too light for the Meos of this circle My assessments of finished villages yield an increase of 8 per cent which is nearly the same as that proposed for the circle

The chahi, nahri and dahri rates may seem low, but the chahi is extremely inferior, while nearly all the extra profits due to canal irrigation are absorbed by the canal dues The dahri is flooded from a hill stream and is precarious and inferior.

The loam is a good strong soil, but is very dry and requires much more rain than it generally receives. The low rate which I have imposed on it is justified by the large percentage of the sown area which fails

The bhur is also inferior.

My barani rate is the same as Mr. Wilson's and the proportions of the various rates are exactly those of the normal cash rents except in the case of dahri of which there are no cash rents, and of chahi and nahri, where I have raised them slightly to allow for the greater security of the cropping Paragraph 26 shows that the chahi and nahri rent rates were considerably reduced at attestation, and I am not sure that this was not a mistake.

The present fluctuating rate on abi flooded from the Lohiuga Canal is Re 1 per matured pakka bigha This rate is in my opinion too high and I propose the same rate as I shall propose in the other circles of this tahsil—10 annas per matured bigha, or Re 1 per acre I do not think the difference between abi and barani cropping can be assessed higher than this In this circle there is no difference between abi and dahri, and as the abstract statement in paragraph 34 shows the difference between the value of the dahri and barani cropping is exactly Re 1 per acre

Bhuder Circle

43 This circle contains the same 58 villages as at last settlement The apparent increase of irrigation is probably real as the total number of wells has increased very largely, and the wells of this circle have always been in fairly regular use Further some increase of resources is only what we should expect from the general prosperity indicated by the considerable increase of ploughs and bullocks, and the comparatively small percentage of the cultivated area under mortgage The soil is very light, and the produce is not valuable, but as Statement X shows it is wonderfully secure, and the circle as a whole has suffered very little during the past ten years of drought On the other hand, though population has increased by only 9 per cent, the net area per owner free for profit is only 6 acres, which is very little for such light soil, and the present jama is a full one, though it stands after reduction as it was before last settlement The enhancement taken by Mr Channing was hardly justified and the assessment broke down terribly in the famine which followed the imposition of the new demand The circle is now in a prosperous condition because, owing to the regular use of the wells and the lightness of the soil, it has not suffered like the rest of the tahsil during the recent bad years, but I do not think there are any grounds for an increase of assessment

I compare below Mr Channing's and Mr Wilson's rates with the half-net-assets rates based on kind and cash rents;—

1	2	3	4	5	6	7	8	9
	Chahi.	Abi	Dahri	Chiknot and Narmot	Magda	Bhur	Total cultivation	Jama
	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	
Mr. Channing ...	3 0 0		2 4 0	1 8 0	1 2 0	0 14 0	1 4 4	49 401
Mr Wilson	2 12 0		2 4 0	1 10 0	1 4 0	0 11 0	1 2 7	45,172
Kind rents							1 7 0	55,650
Cash „	2 9 0	2 12 0	2 8 0	1 10 0	1 10 0	0 14 0	1 5 4	51,713

Mr Wilson's reduction was obtained by largely reducing the bhur rate, which was much too high, as the small decrease in the chahi rate was counterbalanced by a slight increase in the rates on narmot and magda But even Mr Wilson's assessment was a little high, as existing cash rents show, and Mr Maconochie in fixing the assessment for the remaining term of settlement was unable to take Mr Wilson's permanent jama, and it was reduced to Rs 44,420 at which it now stands

The rates which I propose are—

1	2	3	4	5	6	7
Soil.	Rate	Area in acres	Demand	Total	Incidence	Remarks
	Rs a p		Rs	Rs	Rs a p	
Chahi	2 4 0	4,807	10,816			
Abi	2 2 0	82	174			
Dahri	2 2 0	943	2,004			
Chiknot Narmot Magda	1 7 0	10,592	15,226			
Bhur	0 11 6	22,400	16,100	44,320	1 2 4	

This practically maintains the present assessment, but it amounts to 85 per cent of the half-net-assets which may be taken to be Rs 52,000 and to almost exactly one-seventh of the gross produce. It agrees with the result of my village inspections, the total of the tentative assessments of finished villages corresponding with the total of the existing jamas The percentage of the half-net-assets which it is proposed to take is fairly large for Meos, but it is justified by the security of the cropping, and the comparative prosperity of the circle

Chahi —The chahi rate is the average rate for the three kinds of chahi. The rate for kachcha wells will be much lower, but this decrease is counterbalanced by a correspondingly large increase in the rate on the valuable dhenkli chahi

My proposed rate is 8 annas less than Mr Wilson's, but as the half-net-assets rate is only Rs 2-9-0 Mr Wilson's rate seems to have been too high. An effective comparison between the former and present chahi rates in this circle is possible, because the chahi areas of last settlement and now correspond almost exactly as regards the proportion of chahi soil actually irrigated Statement III shows that taking the area irrigated as 1 the chahi soil of last settlement is equal to 1 8 and of the present settlement is equal to 1 7 As my rate amounts to 88 per cent of the half-net-assets rate (Rs 2-9-0) I do not think it can be said to be too low

The decrease in the chahi rate explains why, although there has been an increase of irrigation amounting to 400 or 600 acres according as we accept the figures of Statement II or Statement III (I prefer the former in this circle, as the average irrigation of the last eight years is owing to the large number of bad rabis probably above average), yet no corresponding increase of assessment is possible

Abi —The small abi area in this circle is all irrigated from the Kotla Bund. The area finally classified as abi is, as in the case of dahri, the area which I consider will be flooded in seasons of normal rainfall As explained in my No 609, dated 27th May 1907, to the address of the Settlement Commissioner, it is desirable to get rid as far as possible of the system of abiana, and I propose that this abi should pay a fixed rate like dahri In years of exceptionally good rainfall a larger area than that now classified as abi may possibly be flooded from the Bund This is of course a common feature of all flooded land A great deal of land which is not classed as dahri is occasionally flooded, but, as the flooding is precarious and uncertain, the land is classed as barani In my opinion it would be simplest and best to forego the extra assessment on land which is outside the area now classed as abi in the event of its being irrigated by floodwater from the bund, but, if it is considered necessary to assess it, then a fluctuating rate of annas 10 per matured pakka bigha=Re. 1 per acre may be imposed, subject to conditions which will be discussed later The old rate is a little low, but the new rate (*vide* paragraph 3) is much too high for the inferior irrigation of this bund As I pointed out in paragraph 3 the water is mixed with sand, and the people attach very little value to the irrigation

In this circle the abi area is in two villages only:—

	Acres
Fakharpur Khori	13
Karheri ...	69
Total ..	82

The abi in Fakharpur Khori is deep sand in the bed of the Balauj stream, and no higher fixed or fluctuating assessment can possibly be imposed in this village The abi in Karheri is of a much better quality, and can pay the fixed rate proposed by me and also the fluctuating rate on land flooded but not classed as abi, if Government decide to impose the additional fluctuating rate.

The Ghata Shamsabad and Rawa Bunds are, as shown in paragraph 3, supposed to pay abiana at the rates shown in the statement in that paragraph As the former has been breached for years, and as there has up to the present time never been any irrigation from either bund, I do not understand how any rates can have been fixed for future irrigation from them, and in any case I certainly cannot express any opinion on the suitability of the rates now proposed This cannot be done until the quality of the land after it has silted up sufficiently for irrigation purposes becomes known, and until it is seen what crops can be grown from the irrigation.

Dahri —The dahri is fairly certain of regular flooding in seasons of good rainfall, but is inferior to the dahri of the Dahar Mitha Circle because very little of it is flooded by the Landoha Half the area is flooded by the Tirbeni and half by drainage water from the hills

Barani —The loam and the bhur both vary very much in quality as the villages of which the circle is composed adjoin the other four circles, and their lands resemble the lands of the various circles which they adjoin, but they are on the whole superior to the corresponding soils of the Bangar Circles, and the higher rates are justified The proportions of the rates proposed correspond fairly closely with the proportions of normal cash rent rates, but I have taken a slightly lower bhur rate to allow for some of the inferior land not being regularly cultivated, and I have lowered the abi rate to allow for the fact that the abi in Fakharpur Khori cannot pay anything higher than the bhur rate of the circle.

Dahar Mitha Circle

44 This circle contains the same 31 villages as the former Landoha Circle

There has been an apparently large increase of irrigation but the increase is mostly on kachcha wells and dhenklis and is presumably due to the recent dry seasons and the cessation of flooding The increase in the total number of pakka wells is small. The flooded area has decreased very largely As already explained,

there was no flooding between 1898 and 1904, and the area classed as dahri is that which was flooded in both the years 1904 and 1906. This area amounts to 4,364 acres, and is little more than half the area recorded as dahri at settlement. For reasons already explained it is impossible to say whether the present estimate of the flooded area is a fair one. Possibly no area at all ought to be recorded as flooded, while on the other hand the succession of bad seasons may have led to its being under-estimated In the circumstances, however, the present area must be accepted for assessment purposes The large decrease is only what might be expected. Since the first regular settlement there has been a continual decrease of the area flooded by the Landoha, and this fact was noted and explained by Mr Channing (*vide* paragraph 23 of his Assessment Report) Since last settlement cultivation in Alwar has probably increased still further, and in any case the alterations made to the Atria Bund are quite sufficient to explain the further large decrease of flooding

Such dahri as there is is of excellent quality, as it is nearly all from the Landoha In addition to the large decrease of flooding, which is somewhat compensated for by the increase of irrigation, which varies inversely with the amount of flooding, ploughs and bullocks have decreased, and the area under mortgage is very large

Although these signs of deterioration are probably due to the disastrous series of bad rabis since 1896, still the present assessment is rather high in view of the decrease of flooding, and some reduction is indicated

I compare below Mr Channing's and Mr Wilson's rates with the half-net-assets rates based on kind and cash rents —

1	2			3			4			5			6			7			8
	Chahi			Dahri			Chiknot and Narmot			Magda			Bhur.			Total cultivation			Jama
	Rs	a	p	Rs	a	p	Rs	a	p	Rs	a	p	Rs	a	p	Rs	a	p	Rs
Mr Channing	3	8	0	2	8	0	1	12	0	1	6	0	1	2	0	2	0	0	51,586
„ Wilson	3	0	0	2	4	0	1	10	0	1	6	0	0	14	0	1	13	5	47,694
Kind rents																2	1	7	53,579
Cash „	3	4	6	2	15	0	1	13	9	1	13	9	1	0	6	2	2	7	55,097

Mr Channing decidedly over-assessed this circle as is indicated by the fact that his jama was 2 per cent in excess of the value of his one-sixth gross produce The chahi and bhur rates were especially high, and Mr Wilson substantially reduced the rates on these soils besides giving a small reduction on dahri and narmot The chahi rate remained high, but presumably was framed to allow for the possible expansion of irrigation in dry years The jama fixed by Mr. Maconochie in 1889-90 was Rs 47,276 which is exactly the present jama Owing to the precariousness of the dahri it is extremely difficult to assess this circle, but the rates which I propose are—

1	2	3	4	5	6	7
Soil	Rate	Area in acres	Demand	Total.	Incidence	Remarks
	Rs a p		Rs	Rs	Rs a p	
Chahi	2 12 0	4,491	12,350			
Dahri	2 4 0	4,364	9,819			
Chiknot, Narmot, Magda	1 9 0	12,531	19,580			
Bhur	0 14 0	4,113	3,599	45,348	1 12 5	

This is a reduction of a little over 4 per cent and amounts to about 82½ per cent of the net assets (which may be taken to be Rs 55,000), and to nearly one-sixth of the gross produce, but as I pointed out in paragraph 34 the estimate of the gross produce seems unduly low, and I do not think the proposed assessment can amount to as much as one-seventh of the gross produce.

I have inspected all the villages in this small circle except three, and my tentative village assessments yield a decrease of 4 per cent which agrees with the assessment now proposed for the circle

The proposed decrease is not large in view of the decrease of flooding but, as already pointed out, in this circle this can be and has been somewhat compensated for by an increase of irrigation.

Chahi —The chahi rate is lower than at last settlement, but Mr Channing's rate seems much too high for Meo cultivation, and is not justified by the normal cash rent rate of this settlement The proposed rate is only four annas lower than Mr. Wilson's rate, and this is accounted for by the fact that the present area contains a much larger proportion of kachcha chahi.

Dahri —The dahri rate is by no means high for the good dahri of this circle, which could pay a higher rate if flooding were certain, but it has been kept low to allow for the effect of the Atria Bund

Barani —The low lying loam and clay in the centre of the valley are of excellent quality, and can easily pay Re 1-12-0 per acre, but the circle average is reduced by the inferior, high lying loam alluded to in paragraph 26, which cannot pay a higher rate than the loam of the Bangar Circle which it resembles

Bhur.—The bhur is a good, moist, fertile soil, much superior to the bhur of the Bangar and Bhuder Circles, Except of dahri the proportions of the proposed rates agree with the proportions of normal cash rent rates, and except in the case of chahi my rates are almost exactly the same as Mr Wilson's.

Dahar Khari Circle

45 This circle contains the 28 villages of the Mandikhera Circle and 6 villages of the former Chiknot Circle. There has been an enormous decrease of flooding due to causes detailed in paragraphs 2 and 6, but the number of pakka wells has nearly doubled, and, though the irrigated area in Statement III is not much larger than the area irrigated at last settlement, Statement II shows that a large expansion is possible. Moreover from its situation in the centre of the valley the soil even when not flooded is kept moist by percolation and is almost equal to dahri Still ploughs, bullocks and population have decreased and more than half the cultivated area is under mortgage with the result that the net area free for profit per owner is less than 4 acres. In this circle the mortgage and deterioration are due not so much to any decrease of resources or to over-assessment as to the severe pressure of population on the soil, and the position does not seem to be much worse than in 1883-84 when Mr Wilson revised the assessment Of course the circle is suffering from the effects of the past ten years of drought, but it has suffered less than the Chiknot and Dahar Mitha Circles.

The circle cannot be said to be over-assessed, and it is useless to try and remedy the evil of over-population by any large reduction of assessment

I compare below Mr Channing's and Mr Wilson's rates with the half-net-assets rates based on kind and cash rents The former are for the 28 Mandikhera villages only, and, if they do not bring out the jama in column 9, it is because the rates in the six Chiknot villages do not agree with the Mandikhera rates The jama is that of the circle as now constituted.—

1	2	3	4	5	6	7	8	9
	Chahi.	Abi.	Dahri	Chiknot Narmot	Magda.	Bhur	Total cultivation	Jama
	Rs a. p	Rs a. p	Rs. a. p	Rs. a p	Rs a p	Rs a. p	Rs a. p	Rs
Mr, Channing	3 8 0		2 0 0	1 12 0	1 6 0	1 2 0	1 13 4	38,423
„ Wilson	3 0 0		2 4 0	1 13 0	1 7 0	1 1 0	1 12 7	37,397
Kind rents	..						2 3 10	46 775
Cash „	2 8 0	2 3 0	2 5 0	2 4 0	2 4 6	1 15 0	2 3 10	46,841

Mr Channing's assessment was a reduction of 7 per cent, which as pointed out by Mr Wilson in Section 61 (8) of the Revision Report was hardly required Consequently a very small further reduction was granted at the revision by Mr Wilson, who lowered the rates on chahi and bhur, but raised them on the other soils Mr. Maconochie assessed at Rs 37,411, which is the present jama.

The rates which I propose are—

1	2	3	4	5	6	7
Soil.	Rate	Area in acres	Demand	Total.	Incidence	Remarks
	Rs. a p		Rs.	Rs	Rs a p	
Chahi .	2 0 0	1,762	3,524			
Abi	1 14 0	614	1,151			
Dahri	2 0 0	875	1,750			
Chiknot, Narmot, Magda	1 12 0	15,617	27,330			
Bhur	1 1 0	2,029	2,156	35,911	1 11 6	

This is a reduction of almost exactly 4 per cent, and amounts to only 77 per cent of the half-net-assets, which I take to be Rs. 47,000, but it is almost exactly equal to one-seventh of the gross produce, and in view of the severe pressure of the population on the soil and the serious amount of mortgage is a sufficiently high assessment

Chahi —My proposed rate is very much lower than either Mr Channing's or Mr Wilson's rate, but in this circle the area recorded as chahi at this settlement is very large as compared with the area of average irrigation The proportion which the chahi soil of last settlement bears to irrigation is 1 7, while that of the present settlement is represented by 2 5 Cash rents show that the people consider chahi very little more valuable than good barani, and as I pointed out in paragraph 26 the small difference in the rent of the two soils is due to the high rents taken on dhenklis and wells growing garden crops

Abi —Irrigation is all from the Kotla Bund and the same remarks apply with regard to the method of assessment as in the Bhudei Circle The area to which I wish to apply the fixed rate proposed above is as follows —

Villages	*Acres*
Nagina . ..	451
Rajaka .	42
Bhadas ...	121
Total	614

The rate ought to be the same as in the Bhuder Circle, and in Rajaka and Bhadas will be the same, but I have had to reduce the circle rate because out of the 451 acres irrigated in Nagina 256 acres (*vide* paragraph 3) have been seriously damaged by sand deposits, and it will not be possible to take a much higher rate on this land than the bhur rate of the circle Any orders passed as to the imposition of a fluctuating rate outside the fixed area will apply to this circle also

Dahri —From its situation in the northern half of the valley this circle is now almost beyond the reach of the Landoha, and the dahri lands which depend on the Landoha (about one-fourth of the whole) will be flooded only in exceptional years The rest of the dahri is flooded by hill streams, and is not very good of its kind A lower rate than in the Dahar Mitha Circle is therefore justified both by actual conditions and by cash rents which are very little higher on dahri than on good barani

Barani —My rate on this soil is almost exactly the same as the average of Mr Wilson's narmot and magda rates It is a very high rate but is suitable to the fertile, semi-dahai loam and clay of this circle, which in the hands of Ahirs or Jats would pay an even higher rate

Bhur —My rate is the same as Mr Wilson's It is a very high rate for bhur, but is much below the rate indicated by cash rents which in this circle almost take the form of an all-round rate The proportions of my proposed rates excepting on bhur are very nearly those of the normal cash rent rates.

Chiknot Circle

46 This circle consists of 17 out of the 23 villages of Mr. Channing's Chiknot Circle, and one village (Jalalpur-Nuh) transferred from the Nuh Tahsil at the end of last settlement. The circle is very badly off and has deteriorated seriously since last settlement The decrease of cultivation is not serious, as it is all in the area under fluctuating assessment, but bullocks, ploughs and population have decreased very largely, the net area free for profit per owner is, considering the almost total absence of irrigation, excessively small, and nearly half the cultivated area is under mortgage This deterioration is due partly to over assessment, partly to the unsuitability of a fixed assessment to the conditions of the circle, but chiefly of course to the disastrous effect of the last ten years of drought In paragraph 4 I described the character of the soil and irrigation, and I referred to Statement X as evidence of the vicissitudes through which this circle has passed during the cycle of bad seasons. Owing to the saltness of the subsoil water there is very little irrigation, and the hard, black clay soil, which is capable of producing excellent crops of jowar and wheat in good years, yields little or nothing when the rainfall is scanty. The average percentage of matured to cultivated area is only 73, and in the last two quinquennial periods the percentage fell to 63 and 52 It is obvious that a fluctuating assessment is what the conditions of this circle require, but I found on enquiry that the people are very much opposed to the system, and, though this is not a sufficient reason for rejecting it, yet it must be admitted that a fluctuating assessment is if possible to be avoided in Meo villages.

In the Kotla basin cultivation has fallen off for no other reason than that the fluctuating assessment imposed at last settlement has removed from the lazy Meo the incentive to cultivate a proper area It is to be feared that, if the system is extended to the whole of the circle, cultivation will fall off seriously and the people will be no better off than before, as the area under cultivation will fall below what is necessary for their support In short, a fluctuating assessment will remove a fiscal difficulty, but will not make the circle any more prosperous than it is at present, and will aggravate the characteristic vices of the Meo—laziness and improvidence. For these reasons I do not think a fluctuating assessment suitable, and recommend a light fixed assessment, which, if combined with very careful and judicious revenue management, will, I think, succeed It may be noted that the villages in the Kotla basin now under fluctuating assessment are no better off than those under fixed assessment The following villages have their lands wholly or partly in the Kotla basin and are wholly or partially under fluctuating assessment —

Multhan, Jalalpur-Nuh, Firozpur-Nuh.

The arrangement made at last settlement is described in paragraphs 193, 220 and 223 of the Final Settlement Report A rate of Rs 2 per acre was imposed on the area cultivated At the revision (*vide* Section 62 of Mr. Wilson's report) certain important changes were proposed and sanctioned for seven years As the result of the final arrangement made by Mr Maconochie in 1889, Mr Channing's rate of Rs 2 per cultivated acre was reimposed irrespective of the class of crop grown (*vide* printed Proceedings, Revenue and Agriculture, Nos 41-49 A, dated January 1891. No. 42, paragraph 10, No 41, paragraph 4, No 48, paragraph 3) Mr Maconochie left the district soon after his proposals were submitted, and both his proposal and the orders of Government seem to have been misunderstood or overlooked as the rate has always been levied on the *matured* area, and the first of Mr Wilson's rules has also been allowed to stand Statement XVI shows the fluctuating revenue realised at various periods The decrease during the last ten years is very striking and is the result of the decrease of flooding already noticed. At present the Kotla basin is suffering not from an excess of but from a lack of moisture This is due partly to the network of bunds constructed in the Nuh Tahsil but chiefly to the abnormal character of the seasons. There is no reason to anticipate that in seasons of normal rainfall the jhil will not fill as before In either case the continuance of the present system of fluctuating assessment is desirable A succession of normal years is very unusual in this district, and the cultivation in the jhil is not less

affected by drought than by excess of flooding, as, unless thoroughly moistened by flooding, the hard soil overgrown with rank grass cannot be cultivated I therefore propose the continuance of the present system of fluctuating assessment, which is popular, and which, though it does not stimulate cultivation, is suitable to the peculiar circumstances of the small area within which it is at present imposed

I proceed to compare Messrs. Channing's and Wilson's rates with the half-net-assets rates based on kind and cash rents

The same remarks as to the rates and jamas apply as in the Dahar Khari Circle .—

1	2	3	4	5	6	7	8	9
	Chahi	Abi	Dahri.	Chiknot Narmot	Magda	Bhur	Total cultivation	Jama
	Rs a. p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	Rs
Mr Channing	2 12 0		2 0 0	1 6 0	1 2 0	0 14 0	1 6 0	15,604
„ Wilson ..	1 12 0	.	1 10 0	1 6 0	1 0 0	0 8 0	1 4 8	14,652
Kind rents						„	1 7 5	16,188
Cash „					.		1 6 0	15,170

Mr Channing's assessment was an increase of 15 per cent, and taken as a whole was not considered too high by Mr Wilson (*vide* Section 61 (9) of the Revision Report). The chahi, dahri and bhur rates were however obviously too high, and the permanent reduction given was obtained by largely reducing these rates The important rate however, that on chiknot-narmot, was left unaltered Mr. Maconochie assessed at Rs. 14,151, which is the present fixed assessment

The above assessments may not have been too high at the time they were imposed, but I think the present jama is decidedly too high for the present conditions. It is improbable that the Landoha floods will ever reach this part of the valley in future, and the whole tract is suffering severely from a lack of moisture The fixed rates which I propose are ,—

1	2	3	4	5	6	7
Soil	Rate	Area in acres	Demand.	Total	Incidence,	Remarks
	Rs a p	Rs	Rs	Rs	Rs a p	
Chahi	1 8 0	52	78			
Abi	1 12 0	361	631			
Dahri , ,	1 8 0	152	228			
Baram	1 2 0	10,132	11,398			
Bhur	0 8 0	336	168	12,503	1 2 1	

This is a reduction of 12 per cent and amounts to 82 per cent. of the half-net-assets, which may be taken to be Rs 15,200, and to almost exactly one-seventh of the gross-produce estimate as it stands, though as the estimate is about 6 per cent below normal, the share taken is really less than one-seventh At the time of my inspection the number of finished villages was less in this circle than in any other, but, as far as they go, my village assessments yield a decrease of 12 per cent, and so agree exactly with the assessment proposed for the circle,

Châhi and dahri —My proposed rates are nearly the same as in the Bangar Circle, the chahi and dahri of the two circles being very similar. The dahri is

in only two villages and is flooded by drainage water from the hills Both chahi and dahri are very inferior

Abi.—The abi is all irrigated from the Kotla Bund and the area on which I propose a fixed assessment of Re. 1-12-0 is distributed as follows —

	Acres
Mandhe	8
Hasanpur-Nuh	23
Sultanpur	161
Umra	169
Total	361

The abi of this circle is farthest away from the source of the streams which feed the Kotla Bund, and I have therefore pitched the rate a little lower than in the Bhuder and Dahai Khari Circles to allow for the greater uncertainty of irrigation, but the water when it does come is more beneficial than in any other circle, as the land lies beyond the reach of sand deposits and the soil, owing to its great strength, produces, when flooded, more valuable crops than the sandier abi of the other circles

I mentioned in my description of the Kotla Bund in paragraph 3 that a sluice has been built at Hasanpur-Nuh to let excess water on to the lands inside the bund which are suffering from lack of moisture, and that in connection with this scheme a small bund has been built at Mau No water has passed inside the bund since 1896-97, and it seems unlikely that enough water will ever again come down the bund to permit of the sluice being utilized, but, if it does, the fluctuating rate of 10 annas per pakka bigha proposed in paragraph 43 should be imposed. Orders passed as to the imposition of this fluctuating rate on land on the up stream side of the bund, which not being classed as abi is flooded by water from the bund, will apply to this circle also

Barani —The pitch of the assessment is determined by the rate on this soil, as the area under the other soils is insignificant My rate is much lower than the rates imposed by Messrs Channing and Wilson, but I think it is quite high enough for the extremely precarious cultivation of this circle, which ought, if circumstances had permitted, to have been put under a fluctuating assessment. If a fixed assessment is to be successful, it must be a light one.

Bhur —The area of this soil is very small My rate agrees with the rate imposed by Mr Wilson

Fluctuating area —As at the time of my inspections measurements were not complete in any of the villages under fluctuating assessment, I have not inspected them for assessment, but subject to further enquiry the existing rate and rules appear suitable, and I provisionally recommend that their continuance be sanctioned I shall have inspected the villages probably before this report reaches the Settlement Commissioner and certainly before he has disposed of it, and, if any further report appears necessary, I will submit it separately. If no such report is received, the above proposals may be taken to be final There can I think be no question of a return to the rate on cultivation proposed by Mr Maconochie and sanctioned by Government The proposal was in my opinion an unfortunate one, and should not have been sanctioned A rate of Rs 2 per matured acre is the highest rate that can fairly be imposed, and is only fair when worked with rule (1) of Mr Wilson's rules

Total proposed assessment

47 The total fixed assessment of the tahsil which I have proposed amounts to Rs 2,24,849 against the present assessment of Rs 2,22,919, or an increase of a little less than 1 per cent It was remarked in paragraph 13 of the forecast report that "the thriftless Meos of Firozpur and Nuh have not much improved their resources," and this is certainly true Were it not for the increase of resources in the Bangar Circle due to the introduction of canal

irrigation, the decrease would, owing to the decrease of natural flooding, have been still larger. As it is, it is not possible to do much more than maintain the present assessment by redistributing it over the various circles. As less abiana will be levied in future, it may be said that there has been no increase at all I append for purposes of comparison the rates in tahsil Ramgarh of the Alwar State, and tahsils Pahari and Kama of the Bhartpur State. The rates of tahsil Ramgarh should be compared with those of the Dahar Mitha Circle which it adjoins, those of tahsil Kama with the Bangar Circle, and of tahsil Pahari with the Bhuder and Bangar Circles The State share of the net assets in both Alwar and Bhartpur is two-thirds and the rates are stated in the assessment reports in terms of the local bigha which in Alwar is the pakka bigha (five-eighths of an acre), while in Bhartpur it is two-fifths of an acre To reduce the rates of these States therefore to our standard and measurement it is necessary to increase the Alwar rates by one-fifth and the Bhartpur rates by seven-eighths.

The resulting rates are as follows :—

1	2	3	4	5	6	7	8	9
Circle	Chahi	Abi	Dahri	Chiknot	Narmot	Magda	Bhur	Total cultivation
	Rs a. p	Rs a p	Rs a p	Rs a p	Rs a p	Rs. a p	Rs a p	Rs a. p
Ramgarh (Alwar)	4 0 10	.	3 3 7	2 6 5	1 15 2	1 5 7	1 0 10 0 9 7	2 7 7
Bhartpur — Kama	3 8 3	2 5 8			1 12 0		1 2 9	2 1 9
Bhartpur — Pahari	3 11 1	2 9 6			1 14 0		0 15 0	2 4 10

The rates in Alwar and Bhartpur are very much higher than those in this tahsil, and represent an altogether different standard of assessment

Before ending this paragraph it may be useful to show the result of my fixed abi assessments as compared with the fluctuating system hitherto in vogue The Kotla Bund is the only bund on which there is any land classed as abi, and these remarks apply to this bund only The statement in paragraph 3 shows that the average realisations from abiana during the last 16 years amount to Rs 1,328 This is much more than what I calculate to be the difference between the abi and barani rates of the present abi area, which amounts to Rs 472 only but the former total is swelled by the receipts of the years before 1896, that is, before the recent series of dry years set in and before the alterations to the Atria Bund I have already stated that in my opinion owing to these alterations the Landoha floods are never likely to reach the Kotla Bund in future, and it would be fairer therefore to adopt for comparison the years after 1896. Since 1896-97 realisations from abiana only average Rs 223, which is much less than my assessment of the advantage due to the bund Although the years since 1896 are much below average, still I do not think that realisations from abiana are likely to average more than Rs 472, and Government is not therefore losing anything by the fixed assessment, while the gain to the people and to the subordinate officials which will result from the abandonment of the vexatious and difficult system of abiana is very great I would therefore repeat what I urged in paragraph 43, that it is unnecessary to impose a fluctuating rate on land not classed as abi which happens to be flooded in exceptionally good years

CHAPTER II —MISCELLANEOUS

Protective leases

48 In tracts where wells are protective it is almost impossible that the existing rules for protective leases should conform with the principle that the period of protection should be such as to ensure the well-owner a return of his capital with interest at a fair rate This is clearly brought out by the following statement, which shows for pakka wells the number of years during which

the wet assessment on chahi land in each circle must be remitted to allow of the recovery of the capital alone without allowing anything for interest :—

1	2	3	4	5	6	7	8
Circle	Net-assets chahi soil rate per acre	Net-assets all round barani rate per acre	Net profits per acre due to irrigation	Area in acres irrigated by a 2 lac pakka well	Annual net profit on pakka well.	Cost of pakka well.	Number of years required for recovery of capital only.
	Rs a. p	Rs a p	Rs a p		Rs a p	Rs	
Bangar	3 9 0	3 0 0	1 5 0	6	7 14 0	750	95
Bhuder	5 2 0	2 4 0	5 2 0	6	30 12 0	600	19½
Dahar Mitha	6 9 0	3 0 0	6 9 0	8	52 8 0	500	10
„ Khari	5 0 0	4 6 0	1 10 0	4	6 8 0	300	46
Chiknot*						450	

Note —The sum in column 4 is arrived at by multiplying the difference between the sums in columns 2 and 3 by the area in column 27 of Statement III and dividing the result by the area in column 33

* No data available

The above statement shows that in only two circles would the existing period of 20 years suffice for the recovery of the capital cost, and that in one circle only would it suffice for the recovery of the capital with a fair rate of interest. The two circles in question are of course the Bhuder and Dahar Mitha, where the wells are profitable and are regularly used. In the other three circles wells are purely protective and a very long period is required for recovery of the capital alone In the Chiknot Circle the period would not be less than in the Bangar Circle

I shall defer making any proposals until orders are passed on the proposals in paragraph 49 of the Rewari Report.

Wells falling out of use

49 The rules in Financial Commissioner's Circular Letter No 5890, dated 30th September 1904, as amended by Financial Commissioner's Circular Memo. No. 1, dated 10th April 1907, are suitable and should be extended to this tahsil In the Dahar Mitha and Bhuder Circles, where chahi is much more valuable than barani a good many villages at last settlement distributed their assessment by soil rates, and probably many more will do so when the new assessments are imposed. In the other three circles the chahi is little, if at all, more valuable than good barani, and the assessments will probably be distributed at an all-round rate as before

Rules to meet charges of canal irrigation

50. In paragraph 42 I pointed out that reductions of canal irrigation in villages at present commanded though possible in a few cases are improbable, but that small extensions of irrigation will almost certainly be made in the near future. In Palwal where the difference between the value of nahri and barani after allowing for canal dues is considerable, I proposed certain rules to meet increases and reductions of irrigation (*vide* Palwal Assessment Report, paragraph 47) In this tahsil where the difference between the value of nahri and barani is much less, I do not think the same necessity for such rules exists, but if rules of the nature proposed are sanctioned for Palwal, it would perhaps be advisable for the sake of uniformity to extend them to all canal-irrigated parts of the district. In that case for the eight annas specified in my proposed rule 1 it would be necessary to substitute some such words as "by the difference between the settlement nahri and loam rate," and the same rules would then be applicable to all the three tahsils in which there is canal irrigation.

Deterioration due to reh

51. Reh is serious in one or two villages in the canal-irrigated tract, and although it is hoped that the new drain will improve their condition, any rules sanctioned for the Palwal Tahsil (*vide* Assessment Report, paragraph 48) should be made applicable to this tahsil also

Abi

52 If my proposal to levy a fixed abi assessment is sanctioned, then no rules will be required for the working of the assessment of lands already classed as abi, but as I have proposed a fluctuating rate on irrigation, if any, from the Shakhrawa, Shahchoka and Mau Bunds and on irrigation by means of the Hasanpur sluice, and as Government may wish to impose a fluctuating rate on the other lands not classed as abi, but irrigated from the Kotla Bund, rules for the working of the fluctuating assessment are necessary A single set of rules for the whole district will probably have to be sanctioned finally, but at present I am only in a position to propose rules for this tahsil The following appear suitable —

(1) No abiana shall be levied on any of the following classes of land :—

(*a*) Land classed as abi

(*b*) Land classed as chahi or dahri even if flooded by water from a bund, unless such land is flooded at the express request of the owner or cultivator

(*c*) Land flooded owing to the breaking of a bund

(*d*) Land seriously injured by sand deposits Objections to the levy of abiana on such land may be submitted to the Tahsildar within ten days of the date on which notice of the intention to levy abiana was given, and will be decided by that official after inspection of the spot by himself or by the Naib Tahsildar Abiana should ordinarily be remitted when the land though flooded has become incapable of producing crops of a better class or yield than unflooded land The objector may appeal to the Collector or such officer not lower in rank than an Assistant Collector of the 1st grade as the Collector may authorise against the decision of the Tahsildar within 15 days of the date on which he was made acquainted with it

(2) Abiana shall be levied on the matured area only

(3) Abiana shall be levied on the same land only once in the year The crops of each harvest shall be measured up separately and assessed to abiana, but land which has paid for a matured kharif crop shall not be charged again for a rabi crop if grown

Rule (1) (*b*) is necessary owing to the uncertainty which has existed in the past Lands classed as dahri were regularly assessed to abiana until a few years ago, when the point was raised on appeal and decided against the District Board Mr Halifax and other authorities on the Gurgaon Bunds are of opinion that dahri land advantaged by bund water should pay abiana at half rates and in paragraph 5 of No 58 dated Lahore 19th March 1906 from the Chief Secretary to Government Punjab to the Senior Secretary to the Financial Commissioner Punjab this view finds support, but it is in my opinion quite untenable Land classed as dahri is assessed at a rate which assumes that it will be flooded in years of normal rainfall, and it is unlikely to be flooded by bund water in any year in which it would not be flooded by drainage water in the ordinary way Not only is it unfair as a detail of assessment to levy abiana on dahri land, but as a detail of management it is very difficult to work fairly Where abi and dahri lands adjoin it is often quite impossible to decide with any certainty whether the water which advantages the dahri is from natural flooding or from the bund If left to the patwari he invariably assigns it to the bund On both the above grounds therefore I am of opinion that except in certain specified cases no abiana ought to be levied on dahri land unless it is flooded at the direct request of the owner or cultivator In this tahsil there is no controlled irrigation by cuts, and so this contingency can never arise, but as cases will arise in other tahsils I have left the rule in the form which will be suitable for the whole district Similarly the only occasion when chahi should pay abiana is when the chahi lands are flooded by request This contingency is not likely to arise in this tahsil, but it has arisen and will arise in other tahsils, and the general rule is therefore proper Whenever chahi and dahri lands are extremely inferior and would really be advantaged by bund water, they will of course be excepted from the operation of this rule For instance in this tahsil I should have excepted the chahi and dahri lands of the Chiknot Circle and proposed to assess them at half abiana rates, if there had been any chahi or dahri within the range of flooding, but there is not

Rule (1) (*d*). I think this provision is necessary, because it is very unfair that land which has so deteriorated that it cannot fairly pay even the barani rate imposed at settlement should have to pay abiana in addition. I have roughly indicated the procedure which seems to be necessary for carrying out the rule, but in the other tahsils there will be other reasons justifying remissions of abiana, and a procedure suitable for objections of all kinds will have to be prescribed, and the procedure now proposed need not be considered final

Rule (2) is the existing rule and should be continued.

Rule (3) is one of the rules at present in force in the area under fluctuating assessment. In my opinion it is equally necessary in the case of crops grown on land flooded from a bund The possibility of its adoption was suggested in paragraph 5 of the letter quoted above The existing rule by which abiana has hitherto been levied both on kharif and rabi crops matured on the same land in the same year is manifestly unfair. The only case in which two crops are matured in the same year in flooded abi land is, when a kharif cereal is followed by gochni, bejhar or gram The kharif cereal could not possibly be benefited by the flooding and would generally be damaged, and the yield would almost certainly be less than in barani land The imposition therefore of abiana on the kharif crop in addition to the fixed barani assessment is unfair The real advantage from the flooding is derived from the valuable rabi crop (generally gochni), which can be sown if there has been good flooding, and this is the only crop which ought to be taken into account for the purposes of abiana If cotton matures at the kharif, no rabi crop is possible A matured cotton crop is extremely rare in flooded land and in any case the position remains unaltered, as the net value of cotton and gochni is very nearly the same The various forms therefore which a year's matured cropping in flooded abi land may take are as follows .—

	Kharif	*Rabi*
1	Cotton	
2	Jowar or bajra	Bejhar or gram.
3		Wheat, gochni

In the first two cases, which are unusual, the flooding must of necessity have been very light, or for cotton abnormally heavy, while in the third case which is the prevailing form it will have been average In all three cases the value of the cropping is about the same, and the case for imposing abiana only once in the year is therefore established. Differential crop rates are of course theoretically desirable but their introduction would involve an amount of trouble which would be out of all proportion to the advantages gained One rate for all crops, levied only once a year on the same land, gives a result which is sufficiently fair. The proposed rule may not have been quite clearly worded, and I wish to point out that it is not my intention to propose that a whole field, any part of which has borne a matured kharif crop, shall be exempt from payment of abiana at the rabi The prohibition only extends to that part of the field which has borne a matured kharif crop. Thus in a field of one bigha, if three biswas yield a matured crop at the kharif and are assessed to abiana, the remaining 17 biswas may be separately assessed to abiana at the rabi, if they yield a matured rabi crop

In the Government letter already alluded to it was suggested that the assessment should be made only once a year *i e*, in the rabi, but I think there are objections to this proposal The cultivator who grows only a kharif crop might find it inconvenient to pay the assessment on it at the rabi, and any objections to the assessment of a kharif crop would have to be dealt with by the Collector or Assistant Collector long after the crop had been harvested, and it would be very difficult to come to a proper decision On the whole I think it would be better to retain the rule in the form proposed

The existing rules as to the inspection and assessment of lands liabele to pay abiana are a set drawn up by Mr Hamilton in 1901 The rules have worked extremely well hitherto, and I do not anticipate that many modifications will be necessary, but it will be necessary to amplify them in certain points, *e g*, by making provision for objections &c My proposals will be submitted later when I am in a position to submit rules applicable to the whole district. If it is decided to introduce the new proposals for assessing abi and

levying abiana piecemeal by tahsils, then my proposed rules for this tahsil should be provisionally sanctioned, and the system of fluctuating assessment should continue to be worked according to the rules laid down by Mr Hamilton in so far as they are not cancelled by my proposed rules, and as soon as possible I will submit for sanction a final set of rules for the whole district

Term of settlement and date of imposition of the new demand.

53. The term of settlement which is suitable is 30 years. If a shorter term is finally sanctioned for the canal villages in Palwal, it will probably be advisable to fix the same term for canal villages in this tahsil also, but no orders on this point are required at present The present settlement expired with the rabi instalment of 1907 As pointed out in my No 905 dated 6th August 1907 to the address of the Settlement Commissioner the present assessment was by an oversight sanctioned up to Rabi 1908, (*vide* orders of Punjab Government and of the Government of India in the printed Settlement Report) but as the engagements taken from the owners under Act XXXIII of 1871 were for a period of 30 years ending (approximately) with Rabi 1907, the mistake does not effect the date from which the new demand can be imposed The question has been settled as regards the Rewari Tahsil, and in this tahsil no importance attaches to it, as there appears to be no possibility of orders on this report being received in time to permit of the demand being imposed before Kharif 1908 The new demand should be imposed from that date, provided that orders are received in time

Cesses.

54 The sanctioned cesses are—

	Rs	a	p
Local rate	8	5	4
Lambardari	5	0	0
Total	13	5	4

These should be continued I have submitted separately proposals for the abolition of the office of chief headman, which were called for in Settlement Commissioner's endorsement No 879 of the 9th March 1907

Points on which orders are required.

55 Orders are required on the following points —

(1) The proposed rates and assessments including the method of assessing (*a*) nahri (*b*) abi (*c*) land not classed as abi, but which may possibly be flooded by water from the Kotla Bund (*d*) land which may be flooded from the Shakhrawa, Shahchoka and Mau Bunds (*e*) land in the Kotla basin under fluctuating assessment (paragraphs 42—46)

(2) Adoption of the rules for the remission of the wet assessment when a well falls out of use (paragraph 49)

(3) Question of adopting the rules proposed in paragraph 47 of the Palwal Assessment Report, if they or similar rules have been sanctioned (paragraph 50)

(4) Adoption of the rules proposed in paragraph 48 of the Palwal Assessment Report, if they or similar rules have been sanctioned (paragraph 51)

(5) Adoption of rules for regulating the assessment of abiana on lands not classed as abi, but irrigated by water from District Board Bunds (paragraph 52)

(6) Date of imposition of the new demand (paragraph 53)

(7) Cesses (paragraph 59)

B. T. GIBSON,

Dated 26th September 1907. *Settlement Officer*

Extract from a letter No 579, *dated* 2*nd May* 1902, *from the Deputy Commissioner, Gurgaon District, to the Political Agent, Alwar State*

7 The third point is the most important of all It appears that the Alwar Darbar have erected a huge masonry wall 3½ miles in length, running almost parallel to the hills right up to Atria temple, traversing in its course the old earthen embankment, shown as " Landoha Bunds " on the map referred to in paragraph 4 The zamindars of Firozpur complain most bitterly of this action of the Darbar and aver that the wall in question has entirely intercepted their supply of water I do not know the full particulars of this work, and before I express my opinion on it I shall be glad to know when it was built and with what object But I cannot refrain from remarking that a work of such magnitude should not have been allowed to be constructed without the concurrence of the Punjab Government, considering that its effects are far reaching and are not unlikely to upset all the arrangements hitherto made between the officers of that Government and the Raja of Alwar, for controlling the waters of the Landoha stream

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Extract from a letter No 337, *dated the* 22*nd July* 1902, *from the State Engineer, Alwar, to the Political Agent Alwar*

9 With regard to the Atria Bund nothing has been done to which the Punjab Government can raise objection

10 The bund was constructed in old days and had been working, (whether effectively or not is beside the point) for years before the Punjab Province came into existence

11 As first made, like the majority of village-made earthen bunds, or dhols, it was irregular in form and weak in structure

It burst frequently, when the flood causing the breach ran directly down the old channel of the river to Gurgaon and this may have given rise to a wrong impression of the amount of water which the dividing arrangement at Karaoli should give to Gurgaon

12 To remedy this state of affairs, and secure to the Alwar State their proper share at my suggestion the earth bank of the Atria Bund was faced with masonry, and this is the masonry now complained of.

The masonry has merely been given to prevent the bund breaching and the Alwar State is perfectly within its right to repair or strengthen any bund in its territory in the way most to its advantage, and no one outside the State has any right to make objection.

13 The result of the masonry face wall has been that the bund has not breached in late years and it is hoped will never breach again

This and the many successive dry seasons has caused Gurgaon to receive less water than previously had been their good fortune, mainly through the misfortune to the Alwar State by the breaching of their old established bund

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Extract from a letter No 3074, *dated* 24*th July* 1902, *from the Political Agent, Alwar State, to the Deputy Commissioner, Gurgaon District*

As regards the construction of the Atria embankment I would invite your attention to page 200 of the Gurgaon Settlement Report where you will find that the Atria Bund was constructed by the Jats over 100 years ago

The Alwar Darbar is perfectly within its rights in strengthening or repairing this old bund in any way it considers proper and any action it may have taken in this direction is not therefore open to discussion

GLOSSARY OF VERNACULAR TERMS USED IN THE REPORT.

Vernacular	English.
Abiana	An assessment levied in addition to the assessment at unirrigated rates on account of the advantage derived from irrigation
Ahir	A Hindu caste
Anna	One-sixteenth part of a rupee
Arhar	A pea (Cajanus indicus)
Badni	A gambling transaction
Bajra	Spiked millet (Pencillaria spicata).
Bangar	Uplands
Bania	A Hindu caste
Barani	Dependent on rain
Batai	Rent taken by division of crop
Bejhar	A mixed crop of barley and gram
Bhaiachara	A form of tenure where possession is the measure of right
Bhuder	Sandy
Bigha	A measure of area 1 pakka bigha = $\frac{5}{8}$ of an acre.
Band	Protective embankment
Chamar	A kamin (Q V)
Charsa	Leathern well bucket
Chari	Jowar grown thick for fodder.
Chhalak	One-sixteenth of a ser (Q V)
Chaula or lobia	An autumn pulse (Vigna catiang).
Dahar	Flooded land.
Dhenkli	A hand-lever well
Dhol	A low earthen wall
Dhania	Coriander seed
Dofasli	Yielding two crops in each agricultural year
Fasli	Agricultural year
Ghi	Clarified butter
Gochni	A mixed crop of wheat and gram
Gojra	A mixed crop of wheat and barley
Guar	An autumn pulse (Cyamopsis psoraloides).
Gur	Unrefined sugar
Jagir	An assignment of land revenue
Jagirdar	Holder of an assignment of land revenue
Jama	Land revenue demand.
Jat	A Hindu caste
Jhoka	A man who tends the fire on which the juice of the sugarcane is boiled
Jinswar	Harvest crop statement
Jowar	Great millet (Sorghum vulgare)
Kachcha	(Of a well) not lined with masonry
Kamin	A village servant
Khalsa	Revenue credited to Government as contrasted with jagir (Q V)
Khanzada	A Muhammadan caste
Kharaba	Portion of a crop which has failed to come to maturity
Kharch	Cess realised by landlord in addition to rent
Kharif	Autumn harvest
Khasra girdawari	Harvest inspection register
Lakh	One hundred thousands (100,000)
Lambardar	Village headman
Lao	Literally well rope Well area worked by two (generally) yoke of bullocks
Mali	A Hindu caste
Malikana	Fee paid in recognition of proprietary title
Mash	An autumn pulse (Phaseolus radiatus)
Maund	Eighty lbs
Meo	A Muhammadan caste
Mewat	Tract where Meos live
Moth	An autumn pulse (Phaseolus aconitifolius)
Mung	An autumn pulse (Phaseolus mungo)
Nala	A stream
Pakka	(Of a well) lined with masonry

Vernacular	English.
Pala	The dwarf ber (plum)
Pargana	A group of estates forming a sub-division of a district or tahsil
Pattidari	Held on ancestral or customary shares (a form of village tenure)
Patwari	A village accountant
Pula	Munj grass
Rabi	Spring harvest
Rajbaha	A distributary of a canal
Reh	A saline efflorescence in the soil
Sarson	Rape seed
Ser	A measure of weight=one-fortieth of a maund (Q V)
Seri	A cess of one ser per maund of the produce taken by landlords
Sheikh	A Muhammadan caste
Tahsil	Sub-division of a district in charge of a Tahsildar
Taramira	Rape seed
Taria	A man who makes gur (Q V)
Til	Sesame
Urd	The same as mash (Q V)
Zabti	Cash rents levied on account of crops of which the produce is not divided.
Zamindar	Landowner
Zamindari	A form of tenure where the village is owned by a single proprietor or set of joint proprietors

INDEX

No 57

STATEMENTS.

STATEMENT I —RAINFALL

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Year	June	July	August	September	Total four months	October	November	December	January	February	March	April	May	Total eight months	Total year
1885-86	6 10	3 50	18·70		28 30			60	20		20		20	1·20	29·5
1886-87	6 20	10·80	7 00	1 40	25 40	60			20					80	26·21
1887 88		13 10	14 60	5 60	33 30				20	70	50		40	1 60	35 10
1888-89	60	6 45	6 35	7 75	21 15	85			80	1 10	25		45	3 45	24·60
1889 90	05	5 10	15 60		20 75						43			43	21 18
1890-91	6·50	12 98	8 14	2·22	29 84			20	72		1 80		40	3 12	32·96
1991 92	52	4·22	8 19	6 08	19 01	57			51	05			46	1 59	20·60
1892 93	1 50	4 47	18 47	5 35	24 79			20	1 30	1 99	49		1 92	5 80	30·59
1893 94	4 88	14 15	2·84	6·04	27 91		85		2 37	13	13		06	3·34	31·25
1894-95	2 28	5 84	12·08	9 39	29 57		20	2 76	58	1 48	5 9	31		5·92	35·49
1895-96	2 10	5 22	7 92	29	15 53			55		23	14	13	04	1·09	16·62
1896 97	1 67	11 34	4·70	73	18 44	06	98	·69	03	37	38		50	3·01	21 45
1897 98	1 59	9·08	10 07	1 04	21 76					2 61		03	63	3 27	25·03
1898 99	1 41	4 35	4 29	2·14	12 19			37		13		03	·86	1 39	13·58
1899 1900	10 41	4 18	52	55	15 66	08			05		16	44	25	98	16·64
1900-01	2 00	2·82	49	13 50	22·81	32		2 37	1 23	1 17			05	5 14	27·95
1901 02	97	5 37	6·02	42	13 68							02	03	05	13·73
1902-03	3 17	8 11	8 92	4 42	24·62	50			·06	02	04	11	16	·89	25 51
1903-04	10	3·39	7·37	2·27	13 13	47			56	16	1 29		1 53	4 31	17 44
1904-05	1·22	9·40	12·12	8·84	31 58		99	45	79	37	37			2·97	34·55
1905 06	93	6 05	2 58	3 37	12 93					2·05	66		12	2 85	15·78
Average	2 58	7 13	8 42	3 88	22·01	16	13	39	48	60	36	·05	40	2·55	24 56
Gazette average	2 59	6·77	7 62	4·23	21 21	20	10	39	41	51	·24	·08	49	2 42	23·63

STATEMENT No II – AREA

STATEMENT II—AREA.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
				Uncultivated other than forests				Average area for the years 1900 01 to 1904 05				Wells irrigating land				
Assessment Circle	Year	Total area	Forest	Not available for cultivation	Available for cultivation: Unappropriated (cover under waste)	Available for cultivation: Other	Detail	Total cultivated area	Total crops harvested	Area of crops failed	Total area sown	New wells and old wells which have been made fit for use during the year	Fallen in or become otherwise unfit for use during the year	Total in use or fit for use	Kachcha wells, and Dhenklis and Jhalars in use during the year	Remarks
Bangar	Last settlement	75,887		5,821		2,304	Chahi	4,331						349	17	
							Dahri	1,041						In use 113	Kachcha wells 9	
							Narmot	48,733						Not in use 236	Dhenklis 8	
							Magda	9,214								
							Bhur	4,436								
							Total	67,755								
Do	1905 06	75,446		6,156		2,083	Chahi	5 690	2,522	110	2,632	23	1	478	196	Nahri includes Chahi Nahri and Narmot includes Chiknot throughout this statement
							Nahri	10,075	8,437	253	8,690			In use 375	Kachcha wells 65	
							Abi	2,664						Not in use 101	Dhenklis 131	
							Dahri	589	257	30	287					
							Narmot	35,314	42 627	10,412	53,039					
							Magda	8,148	9,649	2,071	11,720					
							Bhur	4,117	8,843	1,276	5,119					
							Total	67,207	67,336	14,152	81,487					
Bhader	Last settlement.	56,626		16,856		805	Chahi	3 008						389	220	
							Dahri	2 387						In use 272	Kachcha wells 139	
							Narmot	3 752						Not in use 117	Dhenklis 87	
							Magda	5,606								
							Bhur	23,314								
							Total	38,065			"					
Do.	1905-06 ,,	56,468		16,817		847	Chahi	4,807	2,448	208	2 656	35	7	531	556	
							Abi	266	44	22	66			In use 421	Kachcha wells 252	
							Dahri	1,064	609	200	809			Not in use 110	Dhenklis 304	
							Narmot	4,099	4,623	1,372	5,995					
							Magda	6,188	6,277	1 840	8 117					
							Bhur	22,400	21,299	6,862	28,161					
							Total	38 821	35 300	10 504	45 804					

																		273	175
Dahar Mitha	Last Settlement	23,730		7,305		194	Chahi		3,130								In use	186	Kachcha wells 10
							Dahri		8 117								Not in use	87	Dhenklis 135
							Narmot		7,244										
							Magda		3,523										
							Bhur		3,000										
							Total		25,050										
																		823	711
Do.	1905 06	23,670		7,473		700	Chahi		4,191	1,755	197	1,952		9			In use	251	Kachcha wells 168
							Abi			5	1	6					Not in use	72	Dhenklis 546
							Dahri		3,095	1,565	285	1,850							
							Narmot		8,184	10,056	3,419	13,475							
							Magda		5,016	5,014	2,041	7,055							
							Bhur		4,113	4,605	1,918	6,523							
							Total		25,109	23,000	7,861	30,861							
																		140	208
Dahar Khari	Last Settlement	22,669		1,603		110	Chahi		1,249								In use	78	Kachcha wells 77
							Dahri		5,971								Not in use	62	Dhenklis 131
							Narmot		8,304										
							Magda		3,310										
							Bhur		2,110										
							Total		20,952										
																		230	600
Do.	1905 06	22,670		1,606		158	Chahi		1,762	873	111	987		13		8	In use	183	Kachcha wells 112
							Abi		537	349	128	477					Not in use	56	Dhenklis 488
							Dahri		1,087	33	1	34							
							Narmot		11,387	11,323	3,766	15,089							
							Magda		3,416	3,480	1,064	4,553							
							Bhur		2,029	2,426	785	3,211							
							Total		20,807	18,103	5,858	24,351							
																		9	Dhenklis 19
Chikrot fixed	Last Settlement	12,403		725		315	Chahi		62								In use	2	
							Dahri		4,039								Not in use	7	
							Narmot		5,997										
							Magda		206										
							Bhur		341										
							Total		11,335										
Fluctuating	Ditto	1,310		21			Dahri		1,295										
Total	Ditto	13 727		719		318			12,630									9	Dhenklis 19
																	In use	2	
																	Not in use	7	
																		18	101
Fixed	1905 06	12,390		781		506	Chahi		52	58	24	82		1			In use	10	Kachcha wells 3
							Abi		131	193	65	258					Not in use	8	Dhenklis 98
							Dahri		2,527	128	21	149							
							Narmot		7,081	6,957	2,558	9,415							
							Magda		303	288	85	373							
							Bhur		836	189	30	219							
							Total		11,033	7,713	2,783	10,196							
Fluctuating	Ditto	1,300		23		396	Dahri		911	380	197	577							
Total	Ditto	13,690		784		902			11,944	8,093	2,980	11,073		1					
																		18	101
																	In use	10	Kachcha wells 3
																	Not in use	8	Dhenklis 98

STATEMENT II—*concluded*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
				Uncultivated other than forests					Average area for the years 1900-01 to 1904-05			Wells irrigating land				
Assessment Circle	Year	Total area	Forest	Not available for cultivation	*Available for cultivation* — Unappropriated Government waste	*Available for cultivation* — Other	Detail	Total cultivated area	Total crops harvested	Area of crops failed	Total area sown	New wells and old wells which have been made fit for use during the year	Fallen in or become otherwise unfit for use during the year	Total in use or fit for use	Kachcha wells and Dhonklis and Jhalas in use during the year	Remarks
Total Tahsil Fixed	Last Settlement	201,326	.	32,310		4,051	Chahi	12,681						1,160	639	
							Dahri	22,187						In use 671	Kachcha wells 259	
							Narmot	74,030						Not in use 50[illegible]	Dhonklis 380	
							Magda	21,910								
							Bhur	31,110								
							Total	161,958								
Fluctuating	Ditto	1,319		21			Dahri	1,297								
Total	Ditto	202,644		32,310		4,051		166,25						1,16	689	
														In use 651	Kachcha wells 259	
														Not in use 50[illegible]	Dhonklis 380	
Fixed	1905-06	200,668		32,822		4,384	Chahi	16,80[illegible]	7,656	[illegible]3	8,309	51	16	1,587	2,167	
							Nahri	10,17[illegible]	8,137	253	8,190			In use 1,240	Kachcha wells 600	
							Abi	3,601	591	210	897			Not in use 347	Dhonklis 1,567	
							Dahri	9,2[illegible]	2,592	537	3,129					
							Narmot	66,66	75,490	21,527	97,017					
							Magda	23,170	21,717	7,101	31,818					
							Bhur	43,02	32,767	10,871	43,238					
							Total	163,16[illegible]	151,811	41,158	192,996					
Fluctuating	Ditto	1,300	.	23		360	Dahri	911	480	197	677					
Total	Ditto	201,968		32,845		4,7[illegible]		161,371	152,291	41,355	193,67[illegible]	51	16	1,587	2,167	
														In use 1,240	Kachcha wells 600	
														Not in use 347	Dhonklis 1,567	

STATEMENT III —WELLS AND IRRIGATION FROM WELLS.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
Assessment Circle.	Year	Total Number			In use			Sweet			Salt			Brackish			Number of Lifts in use			Average depth						Assessed at chahi rates						Irrigated						Remarks
																				To water			Of water			Total area			Average			Total area			Average			
		Pakka	Kachcha	Dhenkli	Pakka	Kachcha	Dhenkli	Pakka	Kachcha	Dhenkli	Pakka	Kachcha	Dhenkli	Pakka	Kachcha	Dhenkli	Pakka	Kachcha	Dhenkli	Pakka	Kachcha	Dhenkli	Pakka	Kachcha	Dhenkli	Pakka	Kachcha	Dhenkli	Per pakka lao	Per kachcha lao	Per Dhenkli	Pakka	Kachcha	Dhenkli	Per pakka lao	Per kachcha lao	Per Dhenkli	
Bangar.	Last Settlement	349	55	8	113	9	8	195	30	7	47	12	1	107	13	.	266	12	8	30	47	13	23	9	3	3,071	347	10	6	6	1	837	17	1	3	4		The area shown as irrigated is the average of the eight years 1898 99 to 1905 06 and includes both the matured and failed area
	Present do	470	48	68	333	28	68	238	38	67	121	2		117	9	1	916	11	68	30	23	10	29	6	3	5,520	120	30	6	3		2,410	161	26	3	4		
Bhudee	Last do	389	150	89	272	133	87	282	115	85	10	1	2	88	4	2	375	133	87	20	20	14	10	11	1	3,202	556	59	6	1	1	1,765	371	64	5	3	1	
	Present do	531	213	199	478	212	19[illegible]	326	163	18[illegible]	66	2	1	139	48	13	732	211	199	29	21	14	18	8	1	4,024	694	83	6	3	.	2,261	180	79	3	2		
Dahar Mitha	Last do	273	10	136	180	40	136	189	39	124	21	1		63	6	14	301	41	136	21	17	13	19	8	5	2,815	170	121	7	4	1	1,299	110	119		3	1	
	Present do	323	131	357	299	131	357	223	103	271	26	4	17	74	24	61	506	131	357	21	25	13	18	9	5	3,110	772	326	7	6	1	1,847	178	157		1		
Dahar Khasil	Last do	110	81	133	78	77	131	48	31	94	10	25	1	52	22	33	101	78	131	13	13	11	12	8	6	873	287	89	5	5	1	426	247	83	4	3	1	
	Present do	211	49	178	209	48	176	91	17	110	55	6	12	98	25	26	260	18	178	13	13	12	11	7	5	1,425	232	90	5	5	1	545	101	57		2		
Chikor	Last do	9		15	3		19	4		10	2			3		3	2		10	13		11	13		2	52		10	5		1			9			1	
	Present do	19		47	11		17	8		30	1		5	4		10	11		17	18		11	15		5	50		2	5			31		1	3			
Total Taluka	Last do.	1,160	332	387	652	259	380	718	218	320	129	39	7	313	45	51	1,048	264	380	21	21	1	18	9	1	11,030	1,359	289	6	1	1	4,327	775	270	1	3	1	
	Present do	1,684	141	849	1,330	419	849	880	321	709	269	14	35	132	106	111	2,455	431	849	24	21	12	19	8	4	14,120	1,818	537	6	1	1	7,094	920	320	3	2		

STATEMENT IV —Population and cattle

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Assessment Circle	Last Settlement			Population in 1881	1903 04														Population		Remarks
	Bullocks	All cattle	Ploughs.		Bulls and bullocks	Cows	Male buffaloes	Cow buffaloes	Young stock	Sheep	Goats	Horses and ponies	Mules.	Donkeys	Camels	Carts	Boats	Ploughs	In 1891	In 1901	
Bangar	8,403	19,322	4,019	42,44[illegible]	8,544	7,036	258	5,021	10,718	1,788	18,742	986	5	1,322	49	830		4,128½	50,098	56,239	
Bhuder	4,427	10,725	2,051	30,726	4,913	4,461	163	2,34[illegible]	6,144	689	15,147	450	1	850	87	366		2,363	27,836	33,627	
Dahar Mitha	3,188	7,897	1,608	16,591	2,896	2,410	144	1,574	3,500	909	9,180	260		497	10	200		1,527	15,691	19,624	
Dahar Khari	3,024	4,329	1,160	18,031	2,609	1,610	44	1,247	2,850	58	5,221	366		396	16	303		1,216	15,056	17,201	
Chiknot	1,411	1,240	665	6,54[illegible]	961	738	29	514	1,154	148	2,473	105		97	3	120	..	436	5,190	5,596	
Total	20,453	43,513	9,803	1,14,34[illegible]	19,923	16,285	638	10,701	24,366	3,59[illegible]	50,763	2,167	6	3,162	165	1,819		9,670½	1,13,874	1,32,237	

STATEMENT V.—Ownership.

1	2	3	4	5	6	7
Assessment Circle	Year	Detail of main tribes	Number of owners and shareholders.	Area		Revenue assessed.
				Total.	Of which cultivated	
						Rs
Bangar	Last Quadrennial Attestation	Meo	8,432	62,178	59,420	73,748
		Others	909	13,268	7,823	5,913
		Total	9,341	75,446	67,243	79,661
Bhudee	Do	Meo	3,915	29,020	27,809	33,634
		Khanzada	284	5,842	5,437	5,361
		Others	245	21,626	5,543	5,425
		Total	4,444	56,488	38,789	44,420
Dahar Mitha	Do	Meo	2,576	27,499	21,416	39,131
		Sheikh	1	3,040	2,635	6,000
		Others	265	3,133	1,439	2,145
		Total	2,842	33,672	25,490	47,276
Dahar Khari	Do	Meo	2,610	16,695	16,266	29,167
		Khanzada	525	2,989	2,946	5,820
		Others	401	2,986	1,696	2,424
		Total	3,536	22,670	20,908	37,411
Chikhot	Do	Meo	1,575	12,329	11,293	14,457
		Others	77	1,361	657	491
		Total	1,652	13,690	11,950	14,948
Total Tahsil	Do	Meo	19,108	147,721	136,204	1,90,137
		Khanzada	809	8,831	8,383	11,181
		Sheikh	1	3,040	2,635	6,000
		Others	1,897	42,374	17,158	16,398
		Total	21,815	201,966	164 380	2,23,716

STATEMENT VI.—SALES SINCE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	SALES SINCE LAST SETTLEMENT															
	TO ZAMINDARS								TO OTHERS							
	BY OWNERS				BY OCCUPANCY TENANTS				BY OWNERS				BY OCCUPANCY TENANTS.			
ASSESSMENT CIRCLE.	*Area*		Consideration money	Average price per acre	*Area.*		Consideration money	Average price per acre	*Area.*		Consideration money	Average price per acre	*Area*		Consideration money	Average price per acre.
	Total	Cultivated.			Total	Cultivated			Total	Cultivated			Total.	Cultivated		
Bangar	506	491	53,531	105 8					142	137	15,986	112 6	3	3	300	100·
Dhuder	1,549	1,037	40,636	26·2	177	176	8,978	50 7	508	294	9,460	18 6	283	280	17,385	61 4
Dabar Mitha	343	337	21,737	63 4	2	1	75	37 5	3,159	3,151	45,823	14 5	13	13	700	53 8
Dabar Khara	698	691	74,064	106 1	10	10	532	53·2	314	314	43,149	137 4				
Chikmot	152	150	9,478	62 4					74	73	1,728	23 4				
Total	3,248	2,706	1,09,446	61 4	189	187	9,585	50·7	4,197	3,969	1,16,146	27·7	299	296	18,385	61 5

SETTLEMENT AND EXISTING MORTGAGES.

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
MORTGAGES WITH POSSESSION NOW EXISTING																
TO ZAMINDARS								TO OTHERS								
BY OWNERS				BY OCCUPANCY TENANTS				BY OWNERS				BY OCCUPANCY TENANTS				
Area		Consideration money	Average price per acre	Area		Consideration money	Average price per acre	Area		Consideration money	Average price per acre	Area		Consideration money	Average price per acre	REMARKS.
Total.	Cultivated			Total	Cultivated			Total	Cultivated.			Total	Cultivated			
12,129	12,077	5,91,327	48 8	997	994	50,170	50 3	5,706	5,672	2,77,536	48 6	714	713	32,103	45 0	Zamindars are members of an agricultural tribe notified under the Land Alienation Act but in villages where the owners are not members of an agricultural tribe, the term includes transferees who are of the same tribe as the owners of the village
5,985	5,948	2,57,486	43 0	1,088	1,048	55,722	51 2	2,752	2,720	89,200	32 4	637	627	29,111	45 7	
5,128	5,098	2,00,224	39 0	264	263	9,035	34 2	3,780	3,740	1,29,201	34 2	285	277	6,935	24 3	
6,507	6,485	3,77,154	58 0	355	355	21,426	60 4	4,123	4,099	2,30,447	55 9	223	223	15,110	67 8	
4,182	3,964	1,50,292	35 9	252	251	10,556	41 9	1,427	1,306	46,672	32 7	51	51	1,755	34 4	
33,931	33,575	15,76,483	46 5	2,956	2,911	1,46,909	49 7	17 788	17 537	7,73,056	43 5	1,910	1 691	85,014	44 8	

STATEMENT VII—*concluded*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		Sales				Mortgages				Redemptions				
Assessment Circle	Year	Cultivated area.	Land revenue.	Price in rupees.	Price per acre	Cultivated area	Land revenue	Mortgage money	Price per acre	Cultivated area	Land revenue	Mortgage money	Price per acre	Remarks.
Chirvot	1886 87					559	712	18,866	33 7	165	219	4,364	26 4	
	1887 88					443	564	12,530	29 0	105	136	2,201	21 0	
	1888 89	10	10	467	46 7	741	941	21,410	28·9	157	195	4,738	30 2	
	1889 90			99		296	435	7,300	24 7	102	143	2,363	23 2	
	1890 91	8	11	128	16 0	203	247	6,960	34 3	46	58	745	16 2	
	Total	18	21	694	38 6	2,242	2,899	67,396	30 1	575	751	14,411	25 1	
	Average	4	4	139		448	580	13,479		115	150	2,882		
	1891 92	5	7	700	140 0	74	115	3,090	41 8	64	95	2,518	39 3	
	1892 93	34	43	4 860	142 9	483	621	14,703	30·4	464	598	12,920	27 9	
	1893 94	69	93	2 900	42 0	335	446	8,052	24 0	441	625	12,738	28·9	
	1894 95	7	8	290	41 4	345	455	12,349	35 8	189	253	4,654	24 6	
	1895 96	16	21	590	36 9	331	406	13,549	40 9	196	261	5,828	29 7	
	Total	131	172	9,340	71 3	1 568	2,043	51,743	33 0	1,354	1,832	38,662	28 6	
	Average	26	35	1,868		314	409	10,348		271	366	7,732		
	1896 97	29	50	2,139	73 8	283	324	8,904	31 8	128	154	3,478	27 5	
	1897-98	2	3	450	225 0	557	672	26,147	48 7	735	915	25 096	34 1	
	1898-99	6	9	619	103·2	429	564	21 010	49 0	396	584	13 114	33 1	
	1899 1900	6	7	399	66 5	417	616	16,216	38 9	96	112	3,604	39·6	
	1900 01	6	8			152	195	5,821	38 3	104	117	3,533	34 0	
	Total	49	77	3,607	73 6	1,817	2,371	78,157	43·2	1,458	1,882	49,045	33 6	
	Average	10	16	722		363	474	15,631		291	376	9,809		
	1901 02					160	193	6 895	43 1	86	106	2,509	29 2	
	1902-03					159	202	5,788	36 4	88	110	2,002	22 8	
	1903 04					160	212	5,149	32 2	64	89	1,874	29 3	
	1904-05	1	1	150	150 0	167	224	5,714	34 2	74	102	2,107	28 5	
	1905-06	6	8	1,000	166 7	141	228	4,662	33 0	71	92	1,621	22 8	
	Total	7	9	1,150	164 3	787	1,057	28,193	35 8	383	499	10,113	26 4	
	Average	2	2	230		157	212	5,638		77	100	2,023		
Total Tahsil	1886-87	113	589	6,596	58 4	6,195	8,400	1,51,779	24 5	1,658	2,501	37,490	22 6	
	1887 88	145	458	5,651	39·0	6,511	9,826	1,90,791	29 3	1,513	2,416	34 675	22·9	
	1888-89	90	413	5,328	59 2	4 828	6,891	1,15,298	23 9	1,188	2,008	25,530	21 5	
	1889 90	132	221	9,890	74 9	3 398	5,565	97,259	28 6	2 270	3,426	50 107	22 1	
	1890-91	551	1,319	11,119	20 2	2,997	4,463	92,638	30·9	2,308	3,298	43,111	18·7	
	Total	1,031	3,030	38,584	37 4	23,929	35,145	6,47,765	27 1	8,937	13,649	1,90,913	21 4	
	Average	206	606	7,717		4,786	7,029	1,29,553		1,787	2,730	38,183		
	1891 92	128	216	8,658	67 6	2,695	4,248	81,576	30·3	2,583	3 890	55,412	21 5	
	1892-93	81	165	13,166	162·5	2 932	4,679	1,04,151	35 5	3,894	6,116	96 841	24·9	
	1893-94	260	424	16,167	62·2	5,929	9,118	2,12 174	35 8	6,178	9,768	1,43 900	23 3	
	1894-95	251	364	11,950	47 6	3,075	5,508	1,38,287	37 6	2,914	4,315	70,443	24·2	
	1895-96	142	199	9,736	68 6	3,944	5,726	1,41,344	35 8	2,975	4,322	77,749	26 0	
	Total	862	1,368	59,677	69 2	19,175	29 279	6,77,532	35·3	18,544	28,411	4,44,345	15·6	
	Average	172	274	11,935		3,835	5,856	1,35,506	—	3,709	5,682	88,869		
	1896-97	142	231	12,456	87 7	4,646	7,055	1 94 779	41 9	4,235	6,186	1,21 567	28·7	
	1897-98	230	408	25,388	110 3	8,575	12,748	4,70,935	54·9	11,148	17,041	3,73,749	33 5	
	1898-99	187	242	17,382	126 9	5,834	8,832	3,30,636	56·7	4,465	7,088	1,61 164	36 1	
	1899-1900	208	347	29,373	141·2	4,918	7,528	1,84,072	37 4	1,439	2 160	55 193	38 3	
	1900-01	459	782	47,888	104 2	4,856	6,357	2,10,244	43·2	1,514	2,431	60,177	39·7	
	Total	1,176	2,010	1,32,417	112 6	28,329	42,520	13,90,666	49 1	22,801	34,886	7,71,850	33 9	
	Average	235	402	26,483		5,666	8,504	2,78,133		4,560	6,977	1,54,370		
	1901-02	131	251	12,484	95 3	2,598	3,608	1,20 190	46 3	1,811	2,612	55,292	30·5	
	1902-03	219	370	15,827	72 3	3,690	5,123	1,63 015	44 2	1,927	2,757	63,250	32 8	
	1903 04	166	315	9,953	53 5	3,217	4,484	1,41,065	43 8	2,106	3,027	72,061	34 2	
	1904-05	141	203	10,430	74 0	2,843	4,004	1,18,282	41 6	1,964	2,870	58,359	29·7	
	1905-06	527	821	20,863	39 4	2,644	3,518	1,20,688	45 6	1,994	2,608	70,033	35 1	
	Total	1 204	1,960	69,557	57 8	14,992	20,735	6,63,190	44 2	9,802	13,869	3,18,995	32 5	
	Average	241	392	13,911		2,998	4,147	1,32,638		1,960	2,774	63,799		

STATEMENT VIII.—KHARIF CROP RETURN : AVERAGE OF THE FIVE YEARS 1900 TO 1904.

STATEMENT VIII.—Kharif Crop Return: Average

1	2	3	4	5	6	7	8	9	10	11	12	13	14
		Cereals					Pulses						
Assessment Circle	Description of cultivation	Jowar	Bajra	Maize	Other cereals	Total	Mung	Mash	Moth	Guar	Chaula	Other pulses	Total
Bamor	Chahi	6	1	0	2	15		1					1
	Nahri	7	19	135	107	328	3	49	42	25	5	1	126
	Dabri	91	21			112	1	1		1			3
	Narmot	6,155	12,057	119	166	18,517	658	237	161	1,739	88	1	2,820
	Magda	677	4,017	14	10	4,718	125	19	31	567	5		747
	Bhur	49	2,407	8	2	2,261	58	1	41	366	25		491
	Total	7,045	18,322	277	307	25,951	845	308	275	2,698	68	5	4,199
Bhudra	Chahi	3	1	1	1	6			4				4
	Abi		15		1	16	1		1	1			3
	Dabri	65	96	2	9	172	9	1	3	17			30
	Narmot	659	601	80	30	1,420	74	19	19	185	10		307
	Magda	266	2,330	2	14	2,612	185	10	78	450	70		793
	Bhur	285	10,493	2	15	10,795	832	13	485	2,588	756		4,674
	Total	1,178	13,736	37	70	15,021	1,101	43	590	3,241	836		5,811
Dabar Mitha	Chahi	3	2	11	2	18				1			1
	Abi		4			4							
	Dabri	93	328	1	2	424	25	8	7	21	2		58
	Narmot	2,085	2,088	19	59	4,251	412	85	87	308	18		910
	Magda	237	1,546	2	13	1,798	136	4	86	341	30		597
	Bhur	94	2,097		17	2,208	175		118	377	82		754
	Total	2,612	6,065	33	93	8,703	748	94	298	1,048	132		2,320
Dabar Khari	Chahi	1				1							
	Abi	24	69		2	95	5	1	4	8			18
	Dabri	5	14			19	1						1
	Narmot	1,366	1,493	12	90	2,963	115	57	53	519	9		753
	Magda	150	1,003	2	7	1,166	53	6	83	307	5		404
	Bhur	61	859	1	1	922	56	4	49	270	37		416
	Total	1,616	3,438	15	100	5,171	230	68	139	1 104	51		1 592
Chikhot	Chahi												
	Abi	0	2			8				1			1
	Dabri: Fixed	17	7		3	27	1			1			2
	Dabri: Fluctuating	32	59		4	95	9	1	7	40	2		59
	Dabri: Total	49	66		7	122	10	1	7	41	2		61
	Narmot	1 129	975	35	39	2 178	93	25	7	136	1		265
	Magda	31	60			91	3	1	8	15	1		23
	Bhur	10	74			84	5		5	20	1		31
	Total: Fixed	1 193	1 116	35	42	2,388	102	29	15	173	3		322
	Total: Fluctuating	32	59		4	95	9	1	7	40	2		59
	Total	1 225	1 177	35	46	2,483	111	30	22	213	5		381
[illegible]	[illegible]	13	4	19	0	40		1	4	1			6
	[illegible]	67	19	125	107	328	3	49	42	25	5	1	125
	[illegible]	30	90		3	123	0	1	5	10			22
	[illegible]	271	40	3	14	771	32	5	10	7	2		51
	[illegible]	32	57		4	0	2	1	2	40	2		50
	[illegible]	303	52	3	19	841	40	6	12	8	4		150
[illegible]	[illegible]	11 [illegible]	10 414	21	4	29 325	1 [illegible]	42	[illegible]	[illegible]	71	1	3 [illegible]
	[illegible]	1 3 7	[illegible]	2	4	10 [illegible]	202	4	231	1 [illegible]	111		2 [illegible]
	[illegible]	[illegible]	1 [illegible]	0	2	10 [illegible]	1 120	20	[illegible]	[illegible]	21		[illegible]
	[illegible]	13 [illegible]	42 [illegible]	237	611	577 [illegible]	3 [illegible]	642	1,21 [illegible]	[illegible]	1 [illegible]	5	14 [illegible]
	[illegible]	32	[illegible]		4	[illegible]	[illegible]	1	2	4	2		[illegible]
	[illegible]	1 [illegible]	42 [illegible]	237	61	[illegible]	3 [illegible]	643	1,22 [illegible]	[illegible]	1 [illegible]	5	14 [illegible]

OF THE FIVE YEARS 1900 TO 1904

15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Cotton	Sugarcane	Til	Hemp	Chillies	Indigo	Fruits	Vegetables	Chari	Other fodder	Others	Total area of crops harvested	Total area failed	Total area sown	Remarks
41		1	1	7			8	2			76	3	79	Nahri includes chahi-nahri and narwa includes chiknot.
2 683	627	13	102	3	124	8	9	297	4	1	4,327	142	4 469	
25		6						4			150	5	155	
3,252	11	630	186	2	2	1	7	2 089	198	6	27,729	5,665	33,394	
661		93	31			4	1	266	49	2	6 573	1,151	7 724	
95		16	10			1	3	21	46	1	2,945	965	3,910	
6 757	638	759	330	12	126	14	28	2,679	297	10	41,600	7,931	49,731	
97		1		13		3	4	7	1	2	138	7	145	
8								3			25	10	35	
41	1	8	1					20	17		290	121	411	
418	1	56	9	1		6	5	290	82	1	2,605	522	3 127	
435		43	19	1		1	7	216	41	2	4 170	804	4 974	
711		45	48		1	7	13	2 6	112	2	16,664	4,484	21,148	
1,705	2	153	77	15	1	17	29	801	258	7	23,892	5,948	29 840	
80		4		24			16	16		2	161	10	171	
1											5	1	6	
172		32	3				1	8	6		726	136	862	
810		417	30	1		1	6	524	6		6,956	1,832	8,788	
366		59	14				1	1 5	14	..	3,017	929	3 946	
235		25	8				3	3			3,283	1,022	4 305	
1 664		537	55	25		1	27	768	26	2	14 148	3 930	18,078	
4				12		1	14	1			3	1	34	
16							1	12			142	45	187	
1,010		241	26	1			9	847	39	1	5,9	1,176	7,077	
123		23	11				4	136	14		2	323	2,406	
151		9	8				4	34	4		1,551	289	1,840	
1,513		273	45	13		3	32	1,030	57	1	9,7	1,83	11 565	
1		1		2				5			16	6	22	
2		2												
46		2	1					16			49	13	62	
48		4	1					13			216	70	286	
552		177	18	2			2	23			265	83	348	
53		4	1					658	38	1	3,892	1,056	4,948	
12								11			165	20	2 5	
622		184	19	5	19		2	7			134	13	147	
45		2	1					627	38	1	4 278	1 108	5,386	
668		186	20	5	1		2	13			216	70	286	
2								710	28	1	4 494	1,178	5,672	
2,2		6	1	5		4	42	28	1	4	410	21	431	
21	627	13	102	3	124	8	9	297	4	1	4 327	142	4,469	
		1					1	2			15	6	250	
2	1	48	4				1	70	28		1,23	27	1,511	
46		2	1					12		..	216	70	286	
256	1	50	5			..	1	83	2	..	1 47	34	1 797	
6 05	12	1 72	26	5	2	10	29	4 41	3	3	47 08	10	57	
1 5		22	7			5	13	77	11	4	16 2	3	1	
12 4		3	4		1	8	2	86	1	2	24 7	6	31	
12,20	610	190	52	71	127	35	118	7	67	21	93 54	20	114	
40		2	1	..	..	..	..	13	..	..	216	70	2	
12 85	610	1 9	52	71	127	3	118	6 0	671	21	54 64	20	114	

STATEMENT IX —Rabi crop Return

1	2	3	4	5	6	7	8	9	10	11	12
Assessment Circle	Description of cultivation	Cereals and pulses									
		Wheat	Barley	Gojra	Gram	Gochni	Bejhar	Peas	Arhar	Other pulses	Total
Bangar	Chahi	451	1,680	122	8	6				6	2,273
	Nahri	884	1,456	141	920	430	8	34	10	12	3,895
	Dahri	14	18	10	35	20					95
	Narmot	593	2,426	161	9,394	801	649	34	18	6	14,083
	Magda	38	527	18	2,052	63	135	2	4	1	2,638
	Bhur	8	236	5	534	6	25				814
	Total	1,988	6,343	455	12,943	1,326	817	70	32	25	24,000
Bhuda	Chahi	296	1,588	145	3	2				13	2,047
	Abi		4		5	9					18
	Dahri	54	49	35	50	71	36			1	296
	Narmot	263	429	171	473	361	82	2	4		1,765
	Magda	180	443	90	617	178	98	5	6		1,617
	Bhur	327	1,323	213	918	309	125	1	8		3,224
	Total	1,120	3 830	654	3,066	930	341	8	18	14	8 987
Dahar Mirha	Chahi	285	976	59	5	4				30	1,359
	Dahri	120	217	57	74	179	82	1		9	739
	Narmot	195	948	178	958	201	161	3	11	5	2 655
	Magda	121	626	93	269	206	135	2	2	1	1,455
	Bhur	57	331	46	154	152	76		1		817
	Total	778	3 098	423	1,460	742	454	6	14	45	7 025
Dahar Khari	Chahi	105	550	36	4	5				1	701
	Abi	46	46	6	53	42				1	194
	Dahri	6		1	1	4					12
	Narmot	450	1,729	177	1,06[illegible]	1,261	101	10	5	1	4,803
	Magda	69	481	55	36[illegible]	163	22		3		1,102
	Bhur	41	274	49	19[illegible]	78	3	4			648
	Total	717	3,080	324	1,695	1 553	126	14	8	3	7,520
Chikhot	Chahi	2	36	3							41
	Abi	41	1[illegible]	1	7	62					121
	Dahri — Fixed	19	3	9	3	24					58
	Dahri — Fluctuating	88	15	26	3	8					140
	Dahri — Total	107	18	35	6	32					198
	Narmot	432	284	97	55[illegible]	1,328	25				2,721
	Magda	14	12	17	16	32					91
	Bhur	1	6	3	23	20					53
	Total — Fixed	509	351	130	606	1,464	25				3,065
	Total — Fluctuating	88	15	26	3	8					140
	Total — Total	597	366	156	609	1 472	25				3 225
Total Tahsil	Chahi	1,139	4,830	365	20	17				50	6,421
	Nahri	884	1,456	141	920	430	8	34	10	12	3,895
	Abi	87	60	7	65	113				1	333
	Dahri — Fixed	213	267	112	163	298	118	1		10	1,202
	Dahri — Fluctuating	88	15	26	3	8					140
	Dahri — Total	301	302	138	166	306	118	1		10	1,342
	Narmot	1,933	5 816	779	12 451	3,956	1,018	50	38	12	56,047
	Magda	422	2,089	271	3 323	642	390	9	15	2	7 163
	Bhur	434	2,170	316	1,828	505	229	5	9		5,656
	Total — Fixed	5 112	16,708	1,991	18,770	6,015	1,763	99	72	87	50,617
	Total — Fluctuating	88	15	26	3	8					140
	Total — Total	5,200	16,723	2,017	18,773	6 023	1,763	99	72	87	50,757

AVERAGE OF THE FIVE YEARS 1901 TO 1905.

13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Oilseeds															
Sarson	Tarmira	Other oilseeds	Dhania	Onions	Tobacco	Fruits	Vegetables	Miscellaneous food crops	Fodder	Carrots and turnips	Others	Total area of crops harvested	Total area failed	Total area sown.	Remarks
64			1	31	21		22	1	7	18	8	2,446	107	2,553	Nahri includes chahi nahri and narmot includes chiknot
155	2		3	6	1	6	25	14	3			4,110	111	4,221	
10												107	25	132	
564	225	1	2		6	6	1	2	1	5		14 898	4,747	19,645	
95	138				1	1	1			2		3,078	920	3,996	
25	58				1							898	311	1,209	
913	423	1	6	37	32	13	49	17	11	25	8	25,535	6,221	31,756	
79	8		2	24	88		23	3	2	27	12	2,310	201	2,511	
1												19	12	91	
15	8											319	79	398	
142	74	1	2			14						2,018	650	2 668	
210	256	5			1	17			1			2,107	1 036	3,143	
692	664	19				29			7			4,635	2,378	7,013	
1 139	1,005	25	4	24	89	60	23	3	10	27	12	11,408	4,556	15,964	
78	4	1	1	35	46		30	3		24	13	1,594	187	1,781	
13	84										1	839	149	988	
230	200		1								1	3 100	1,587	4,687	
194	347										1	1,997	1,112	3,109	
176	329											1,822	896	2,218	
697	964	1	2	35	46	9	30	3		24	16	8,852	3,931	12,783	
52			1	20	18	1	21		1	23	2	840	113	953	
9	4											207	83	290	
1												13		13	
446	156	1	19			3				1		5,422	2,590	8,012	
146	98	2										1,406	741	2,147	
97	128	2	..									875	496	1,371	
751	384	5	18	20	18	4	31		1	24	2	8,763	4,023	12,786	
			1	8			2		..	3	1	56	24	80	
4			41					11				177	59	236	
1			20									79	8	87	
12	11				..			..			1	164	127	291	
13	11		20								1	243	135	378	
138	23	1	76					5		1		2 965	1,502	4,467	
12												103	65	168	
1	1											55	17	72	
156	24	1	138	8			2	16	..	4	1	3,435	1,675	5,110	
12	11		..								1	164	127	291	
168	25	1	138	8			2	16		4	2	3,599	1,802	5 401	
273	7	1	6	118	173	1	98	7	12	95	34	7,246	632	7,878	
155	2		3	6	1	6	25	14	8			4 110	111	4,221	
14	4		41					11				403	154	557	
40	92		20		..	2	..		..	..	1	1 357	261	1 618	
12	11										1	164	127	291	
52	103		20			2				..	2	1,521	388	1 903	
1,526	678	4	93		8	30	1	7	2	7	1	23 403	11,276	30 679	
657	537	7			2	18	1			2	1	8 68°	3,574	12 553	
991	1,189	21			1	20			7			7,785	4,098	11,883	
3 656	2,800	33	163	124	185	86	125	30	21	104	37	57,900	20,400	78 300	
12	11										1	164	127	291	
3 668	2,811	33	163	124	185	86	125	30	21	104	38	58,157	20 533	78,690	

STATEMENT X —Matured area for the 21 years, 1885-86 to 1905-06

1	2	3	4	5	6	7	8
Assessment Circle	Year.	Cultivated area	Matured area			Percentage on area cultivated	Remarks
			Kharif	Rabi	Total		
Dasgar.	1885-86	67,136	46,253	22,139	68,392	101·9	
	1886-87	67,164	46,436	18,951	65,387	97·3	
	1887-88	66,931	40,822	31,051	71,873	107·4	
	1888-89	66,894	49,369	32,869	82,238	122·9	
	1889-90	67,298	48,405	18,565	66,970	99·5	
	1890-91	67,348	37,794	37,455	75,249	111·7	
	Average ..	67,125	44,505	27,778	72,343	107·7	
	1891-92	67,364	49,295	29,054	78,349	116·3	
	1892-93	67,616	44,428	36,768	81,196	120·1	
	1893-94	67,685	41,971	35,250	77,221	114·1	
	1894-95	67,579	46,306	29,394	75,702	112·0	
	1895-96	67,354	39,922	25,999	65,921	97·8	
	Average	67,520	44,385	31,293	75,678	112·0	
	1896-97	67,116	41,385	26,216	67,601	100·3	
	1897-98	63,392	47,628	30,543	78,171	123·3	
	1898-99	67,604	38,247	15,506	53,753	79·5	
	1899-00	67,392	18,054	13,233	31,287	46·4	
	1900-01	67,724	41,033	40,560	81,593	120·5	
	Average	66,706	37,270	25,211	62,481	93·6	
	1901-02	67,759	33,053	12,393	45,446	67·0	
	1902-03	67,795	49,004	23,873	72,877	107·5	
	1903-04	67,673	38,478	15,111	53,589	79·2	
	1904-05	67,357	47,433	35,740	83,173	123·5	
	1905-06	67,207	41,790	25,535	67,334	100·2	
	Average	67,558	41,951	22,531	64,484	95·4	
	Average of 21 years	67,123	42,244	26,486	68,730	102·2	
	Average of the years selected for the Produce Estimate	67,062	41,800	25,535	67,335	99·5	
Indian	1885-86	35,253	19,979	14,217	34,196	96·9	
	1886-87	34,663	19,464	11,582	31,046	89·5	
	1887-88	33,925	13,233	15,982	29,215	87·6	
	1888-89 ..	35,884	21,430	15,224	36,654	111·4	
	1889-90	33,867	21,497	9,218	30,715	90·6	
	1890-91 ..	34,265	16,020	15,579	31,599	92·2	
	Average	33,895	18,320	13,617	31,937	94·2	
	..	35,024	22,504	14,851	37,355	107·7	
		36,188	22,076	17,451	39,527	107·7	
		37,168	19,312	19,703	39,015	104·8	
	..	37,273	20,318	17,613	37,931	101·9	
	.. ..	37,519	17,170	19,583	36,753	98·5	
	Average	36,634	20,276	16,461	36,737	100·5	

STATEMENT X—*continued*

1	2	3	4	5	6	7	8
Assessment Circle	Year.	Cultivated area	Matured area			Percentage on area cultivated	Remarks.
			Kharif	Rabi.	Total		
Bhudra—concluded	1896-97 ..	37,271	20,734	14,542	35,276	94 6	
	1897-98 ..	37,986	24,286	12,498	36,764	96 8	
	1898 99 . .	38,451	19,564	8,618	28,182	73 3	
	1899 1900	38,576	13,384	5,843	19,227	49 8	
	1900-01 . . .	38,863	28,668	17,881	46,549	119 7	
	Average ..	38,229	21,323	11,877	33,200	86 8	
	1901-02 .. .	38,928	17,886	4,762	22,648	58 2	
	1902 03	38,892	27,971	10,123	38,094	97 9	
	1903 04 . .	38,962	18,204	7,318	25,522	65 5	
	1904 05	38,849	26,729	16,954	43,683	112 4	
	1905-06 .	38,624	23,891	11,408	35,299	90 9	
	Average .	38,891	22,936	10,113	33,099	85 0	
	Average of 21 years	36,809	20,099	13,046	33,745	91 6	
	Average of the years selected for the produce estimate	38,699	23,892	11,408	35,300	90 7	
Dahar Mitha.	1885-86	24,419	10,604	15,839	26,443	108 3	
	1886 87	24,171	11,332	13,545	24,877	102·9	
	1887-88	23,994	6,807	17,802	24,609	102 6	
	1888-89 .	23,956	12,641	14,512	27,153	113 3	
	1889-90	23,727	12 614	10,422	23,036	97 1	
	1890 91 .	24,035	10,821	13,825	24,646	102·5	
	Average	23,977	10,843	14,021	24,864	103 7	
	1891 92 . . .	24 542	14,540	12,425	26,965	109·9	
	1892-93	25,256	14,081	15,784	29,865	118·2	
	1893 94 . . .	25,620	8,135	20,084	28,219	110·1	
	1894-95	25 670	12 415	17,152	29,567	115·2	
	1895 96 . ..	25,691	8,660	11,066	19,726	76·8	
	Average	25,356	11,566	15,302	26,868	106·0	
	1896 97	25,710	11,806	13,599	25,405	98 8	
	1897 98	25,754	14,002	9,279	23,281	90·4	
	1898 99	25,736	11,090	7,214	18,304	70·9	
	1899-1900	25 864	7,009	5,077	12,086	46·7	
	1900-01	25 884	17,075	12 910	29,985	115·9	
	Average	25 802	12,196	9 616	21,812	84 5	
	1901-02 .. .	25,808	8,351	4,011	12,362	47·9	
	1902 03 . .	25,834	17,223	7,267	24,490	94·9	
	1903 04 .	25,768	10,724	5,618	16,342	63 4	
	1904-05 . ..	25,512	17,370	14,451	31,821	124 7	
	1905-06 ..	25,499	5,140	7,364	12,504	49·0	
	Average	25 685	11,762	7 742	19 504	75 9	
	Average of 21 years	25,187	11,545	11,663	23 414	93 0	
	Average of the years selected for the produce estimate	25,761	14,148	8,952	23,000	89·3	

STATEMENT X—*continued*

1	2	3	4	5	6	7	8
Assessment Circle	Year.	Cultivated area	Matured area			Percentage on area cultivated	Remarks
			Kharif	Rabi	Total		
Dahar Khari	1885 86	20,860	4,683	17,960	22,643	108 5	
	1886-87	20 839	8,650	11,746	20,396	97·9	
	1887-88	20,650	4,248	18,038	22,286	107 9	
	1888-89	20,565	11,179	11,982	23,161	112 6	
	1889 90	20,612	10,726	9,636	20,362	98 8	
	1890-91	20,200	6,703	13,328	20,031	99 1	
	Average	20,574	8,701	12,946	21,247	103 3	
	1891 92	20,714	11,560	13,226	24,786	119·7	
	1892 93	20,814	7,305	16,024	23,329	112 1	
	1893 94	20,720	4,224	18,163	22 387	108·0	
	1894-95	20,735	7,787	16 731	24 528	118 3	
	1895-96	20,741	5 754	10,432	16 186	78 0	
	Average	20,745	7,328	14,905	22,243	107·2	
	1896 97	20,756	7 695	13 872	21 567	103·9	
	1897 98	20,775	9,608	11,635	21,143	101 8	
	1898 99	20 937	7,539	9,062	16 601	79·7	
	1899 1900	20,855	4,116	4,276	8,392	40 2	
	1900-01	20 890	10 707	13,037	23,744	113·7	
	Average	20 822	7 931	10 356	18,287	87·8	
	1901 02	20 920	4,947	3,513	8,460	40 4	
	1902 03	20 916	10,606	10,459	21 065	100·7	
	1903 04	20,922	9,938	6,431	16 369	78 2	
	1904-05	20,918	12,448	10 373	22,821	109 1	
	1905 06	20,897	4,041	5 470	9 511	45 5	
	Average	20,914	8 396	7,249	15,645	74·9	
	Average of 21 years	20,769	7 832	11,068	19 500	93 9	
	Average of the years selected for the present demand estimate	20,913	9,730	8 763	18,493	88 4	
Chitror	1885 86	11 180	1,734	8,049	9 783	87 5	
	1886 87	11,016	2,529	7,255	9,783	88 8	
	1887 88	10 759	1,330	8,203	9 602	89·2	
	1888 89	10,698	4,304	6 533	10,837	99 4	
	1889 90	11 653	4 834	5,803	10,637	91 3	
	1890 91	11 798	1 961	8,678	10,639	90·2	
	Average	11 225	2,997	7,303	10 ·00	91 5	
	1891 92	11 631	4,403	7,065	11,468	98 7	
	1892 93	11 461	3,049	8,251	11 300	98 6	
	1893 94	11 699	2,511	8 164	10 675	91 3	
	1894 95	11 651	3,980	7,069	10,731	92 1	
	1895 96	11 737	1,922	2,274	4 196	35 4	
	Average	11 632	3 0 4	6 629	9 669	83 5	

STATEMENT X—*concluded*

1	2	3	4	5	6	7	8
Assessment Circle	Year	Cultivated area	Matured area: Kharif	Matured area: Rabi	Matured area: Total	Percentage on area cultivated	Remarks
Chikhot—concluded.	1896 97	11,658	1,988	6,602	8,590	73 7	
	1897-98	12,164	4,583	5,766	10,349	85 1	
	1898 99	12,308	3,581	3,121	6,702	54 5	
	1899 1900	12,381	603	448	1,040	8 5	
	1900-1900	12 393	4,862	6,783	11,645	94	
	Average	12,181	3,123	4,544	7,667	62 9	
	1901 02	12,230	2,197	679	2,876	23 5	
	1902 03	11,994	4,666	2,805	7,471	62 3	
	1903-04	12,031	4,723	2,222	6,945	57 7	
	1904 05	12,134	6,026	5,509	11,535	95 1	
	1905-06	11,944	728	1,711	2,439	20 4	
	Average	12,067	3,668	2,585	6,253	51 8	
	Average of 21 years	11,740	3 140	5 410	8 550	72 8	
	Average of the years selected for the produce estimate	12,156	4,494	3,599	8,093	66·6	
Total Tahsil	1885-86	1,56 848	83 252	78 204	1 61,456	101 6	
	1886-87	1,57 873	88,410	63,079	1,51,489	96 0	
	1887-88	1,55 659	66,449	91,136	1,57,585	101 2	
	1888-89	1,55,191	98,923	81,120	1,80 043	116 0	
	1889-90	1,57,157	98,076	53,644	1,51,720	96 5	
	1890-91	1,57,652	73,319	88 845	1,62,164	102 9	
	Average	1,56,706	85,035	75,565	1,60,600	102 5	
	1891 92	1,59 276	1,02 702	76,641	1,79,343	112 6	
	1892 93	1,61,835	90,929	94,278	1,85,207	114 4	
	1893 94	1,62,892	76,153	1,01,324	1,77 477	109·0	
	1894 95	1 62 938	90,224	88,308	1,78,532	109 6	
	1895 96	1,62,270	73,423	62,359	1,35,782	83 7	
	Average	1,61 843	86 686	84,582	1,71,268	15 8	
	1896 97	1,62,810	83,598	74,831	1,58,429	97 3	
	1897 98	1,60,071	1,00,087	69,621	1,69 708	106 0	
	1898-99	1,64 996	80,021	43,521	1,23,542	74 9	
	1899 1900	1,65 068	43,166	28 875	72,041	43 6	
	1900-01	1,67,764	1,02 345	91 171	1,93 516	116 7	
	Average	1,63 740	81,643	61 604	1,43,447	87·6	
	1901 02	1,65 645	66 434	25 358	91,792	55 4	
	1902-03	1,65,431	1,09,470	54 527	1 63,997	99·1	
	1903-04	1,65,356	82 067	36 700	1 18 767	71 8	
	1904 05	1,64,770	1,10,096	83 [illegible]	1,9[illegible]	117 1	
	1905-06	1 64 371	75 509	51 [illegible]	1,[illegible]	77·3	
	Average	1 [illegible]	[illegible]	[illegible]	1 [illegible]	81·2	
	Average of 21 years	1,61 [illegible]	[illegible]	[illegible]	1,53 [illegible]	95 2	
	Average of the years selected for the produce estimate	1 65 91	[illegible]	54,157	1,22,2[illegible]	92·0	

STATEMENT XI—Cultivating Occupancy

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
						Area cultivated by tenants paying rent							Detail of rents and area on which paid											
						With right of occupancy			Without right of occupancy					Rent in kind							Cash rent			
Assessment Circle	Year	Detail	Total cultivation	Area cultivated by owners	Area cultivated by tenants free of rent or at a nominal rent.	Paying at revenue rates with or without malikana.	Paying other cash rents	Paying in kind with or without an addition in cash	Paying at revenue rates with or without malikana	Paying other cash rent.	Paying in kind with or without an addition in cash	Total held by tenants paying rent	Detail	Zabti rent	½ produce or more	½ and less than ⅓	⅓ and less than ¼	Less than ¼	By fixed amount of produce	Total area under rent in kind	Total area paying at revenue rates with or without malikana.	Total area paying other cash rents.	Total cash rents paid on area entered in column 23	Incidence per acre of rents in columns 23 and 24
																							Rs	Rs
Banjar	Last quadrennial attestation	Number of holdings	27,786	14,164	838	2,561	277		2,974	4,466	2,500	12,784	Irrigated		1,656	2	20	1	1	1,686	1,237	1,603	7,051	4 4
		Area	77,287	42,698	1,004	5,073	385		5,280	8,594	4,255	23,587	Unirrigated		2,556	6	6		1	2,569	4,043	6,991	25,427	3 6
													Total		4,312	8	32	1	2	4,255	5,280	8,594	32,478	3 8
Bhader ..	Do	Number of holdings	17,443	8,048	660	2,417	215		1,659	3,137	1,317	8,745	Irrigated		145		44	4	2	195	289	720	4,041	5 6
		Area	39,058	30,278	894	4,894	468		3,277	7,305	1,942	17,886	Unirrigated		1,737		10			1,747	2,988	6,585	14,984	2 3
													Total ..		1,882		54	4	2	1,942	3,277	7,305	19,025	2 6
Dabar Mitha	Do.	Number of holdings	11,040	4,808	383	696	13		706	3,378	1,063	5,851	Irrigated		244		28			272	195	1,291	9,507	7 4
		Area	25,541	12,747	448	1,518	20		1,217	7,883	1,708	12,846	Unirrigated		1,434		2			1,436	1,022	6 592	33,650	5 1
													Total		1,678		30			1,708	1,217	7,883	13,157	5 5
Dabar Khari	Do	Number of holdings	12,674	5,049	283	741			909	2,640	2,152	6,442	Irrigated		279		26	4		309	72	612	4,205	6 9
		Area	20,910	11,105	269	1,196			1,100	4,456	2,754	9,506	Unirrigated		2,430		7	8		2,445	1,028	3,844	26,729	7 0
													Total		2,709		33	12		2,754	1,100	4,456	30,937	6 9
Chiknot	Do	Number of holdings	6,911	3,238	190	466			936	573	1,511	3,486	Irrigated		21					21	9	12	55	4 6
		Area	13,026	7,210	134	808			1,094	717	2,068	4,682	Unirrigated		2,042					2,042	1,085	705	2,830	4 0
													Total		2,063					2,063	1,091	717	2,885	4 0
Total Tahsil	Do	Number of holdings	75,857	36,205	2,341	6,881	505		7,184	14,189	8,549	37,308	Irrigated		2,345	2	124	9	3	2,483	1,802	4,238	24,862	5 9
		Area ..	1,48,822	94,036	2,779	13,469	873		11,968	28,955	12,722	68,007	Unirrigated		10,199	6	25	8	1	10,239	10,166	24,717	1,03,620	4 2
													Total		12 544	8	149	17	4	12,722	11,968	28,955	1,28,482	4 4

STATEMENT XII—YIELD DATA.

1	2	3	4	5	6	7	8
			Experiments		Assumed yields		
Circle	Crops	Soils	Area in acres	Average yield in sers	At last Settlement	Now	Remarks
BANGAR	Jowar	Chahi			320	240	Mr Channing's barani yields are for all barani including bhur
		Nahri				240	
		Dahri				240	
		Barani				200	
		Bhur				100	
	Bajra	Chahi			240	240	
		Nahri				240	
		Dahri				200	
		Barani				160	
		Bhur				140	
	Maize	Chahi			400	320	
		Nahri				320	
		Dahri					
		Barani				200	
		Bhur				200	
	Mung	Chahi			200	120	
		Nahri				120	
		Dahri				120	
		Barani				120	
		Bhur				120	
	Mash	Chahi			200	120	
		Nahri				120	
		Dahri				120	
		Barani				120	
		Bhur				120	
	Moth	Chahi			240	160	
		Nahri					
		Dahri					
		Barani				160	
		Bhur				160	
	Chawla.	Chahi				80	
		Nahri					
		Dahri					
		Barani				80	
		Bhur				80	
	Til	Chahi			200	140	
		Nahri				140	
		Dahri				140	
		Barani				140	
		Bhur				140	
	Cane	Nahri				640	
	Cotton	Chahi			160	200	
		Nahri	3·2	184		160	
		Dahri				200	
		Barani	1·1	347		160	
		Bhur				100	
	Wheat	Chahi			520	400	
		Nahri	2·4	301		320	
		Dahri			400	360	
		Barani				240	
		Bhur			260	200	
	Barley	Chahi	2·3	867	600	480	
		Nahri	4·3	598		400	
		Dahri			440	400	
		Barani				300	
		Bhur			320	240	
	Gram	Chahi				320	
		Nahri	·8	367	320	280	
		Dahri				320	
		Barani	3·9	504		240	
		Bhur				100	
	Gochni	Chahi				100	
		Nahri				320	
		Dahri			320		
		Barani				240	
		Bhur				200	

STATEMENT XII—continued.

1	2	3	4	5	6	7	8
Circle	Crops	Soils	Experiments		Assumed yields		Remarks
			Area in acres	Average yield in acres	At last settlement	Now	
Bayar—*concld*	Sarson	Chahi Nahri Dahri Barani Bhur	20	508	200	240 200 160 100 100	
	Taramira	Chahi Nahri Dahri Barani Bhur			240	240 160 100	
Bhudder	Jowar	Chahi Abi and Dahri Barani Bhur	17	92	240	240 240 160 100	
	Bajra	Chahi Abi and Dahri Barani Bhur	6	107	240	240 240 160 140	
	Maize	Chahi Abi and Dahri Barani Bhur				280 280 240 280	
	Mung	Chahi Abi and Dahri Barani Bhur			200	120 120 120	
	Mash	Chahi Abi and Dahri Barani Bhur				120 120 120	
	Moth	Chahi Abi and Dahri Barani Bhur			240	160 160 160 160	
	Chanla	Chahi Abi and Dahri Barani Bhur				80 80	
	Til	Chahi Abi and Dahri Barani Bhur			200	140 140 140 110	
	Cotton	Chahi Abi and Dahri Barani Bhur			140	200 200 160 100	
	Wheat	Chahi Abi and Dahri Barani Bhur			520 440 260	480 400 240 200	
	Barley	Chahi Abi and Dahri Barani Bhur	92 11	682 386	600 480 280	600 440 300 240	
	Gram	Chahi Abi and Dahri Barani Bhur	17	280	320	320 300 280 200	
	Goshni	Chahi Abi and Dahri Barani Bhur			320	440 360 280 200	
	Sarson	Chahi Abi and Dahri Barani Bhur	14	178	200	200 200 160 160	

STATEMENT XII—continued.

1	2	3	4	5	6	7	8
Circle	Crops	Soils.	Experiments		Assumed yields		Remarks.
			Area in acres	Average yield in sers.	At last Settlement.	Now	
Bhuden—concld	Turamira	Chahi	..	..	240	200	
		Abi and Dahri				200	
		Barani				160	
		Bhur	1 3	160		160	
	Jowar.	Chahi	6 5	173	320	280	
		Dahri				280	
		Narmot				260	
		Bhur				140	
	Bajra.	Chahi	2·2	359	240	240	
		Dahri				240	
		Narmot				220	
		Bhur				200	
	Maize	Chahi			400	320	
		Dahri				320	
		Narmot				240	
		Bhur					
	Mung.	Chahi	..		200	160	
		Dahri				160	
		Narmot				160	
		Bhur					
	Mash.	Chahi			200	160	
		Dahri				160	
		Narmot				160	
		Bhur					
	Moth	Chahi			240	200	
		Dahri				200	
		Narmot				200	
		Bhur					
	Chinula	Chahi			160	120	
		Dahri				120	
		Narmot				120	
		Bhur					
	Til.	Chahi	1 5	180	200	140	
		Dahri				140	
		Narmot				140	
		Bhur				140	
	Cotton	Chahi	3·3	252	200	240	
		Dahri	3·9	133		240	
		Narmot				200	
		Bhur				120	
	Wheat	Chahi	1 1	409	600	560	
		Dahri	1 3	354	480	440	
		Narmot	1 1	268	320	280	
		Bhur				200	
	Barley.	Chahi	5	667	680	680	
		Dahri			520	480	
		Narmot	..		360	360	
		Bhur				240	
	Gram.	Chahi	..		400	400	
		Dahri				400	
		Narmot				360	
		Bhur				240	
	Gochni.	Chahi	2	680	440	480	
		Dahri				440	
		Narmot				320	
		Bhur				240	
	Sarson	Chahi	1·3	180	200	200	
		Dahri				200	
		Narmot				160	
		Bhur				160	
	Turamira	Chahi	..	..	240	200	
		Dahri				200	
		Narmot				160	
		Bhur				160	

DAMAN MIRHA

STATEMENT XII—continued

1	2	3	4	5	6	7	8
			Experiments		Assumed yields		
Circle	Crops	Soils	Area in Acres	Average yield in seers	At last Settlement	Now	Remarks
Dahar Khabi	Jowar	Chahi Abi and Dahri Barani Bhur	2 1	200	320	360 320 280 200	
	Bajra	Chahi Abi and Dahri Barani Bhur			240	240 240 200	
	Maize	Chahi Abi and Dahri Barani Bhur			400	240 200	
	Mung	Chahi Abi and Dahri Barani Bhur			200	160 160 160	
	Mash	Chahi Abi and Dahri Barani Bhur			260	160 160 160	
	Moth	Chahi Abi and Dahri Barani Bhur			240	200 200 200	
	Chaula	Chahi Abi and Dahri Barani Bhur				120 120	
	Til	Chahi Abi and Dahri Barani Bhur				140 140	
	Cotton	Chahi Abi and Dahri Barani Bhur	1	209	200	260 240 220 140	
	Wheat	Chahi Abi and Dahri Barani Bhur	1 1	302	600 400 320	520 400 320 240	
	Barley	Chahi Abi and Dahri Barani Bhur	4 3	583	680 440 360	640 480 400 280	
	Gram	Chahi Abi and Dahri Barani Bhur	1 3	404	400	480 440 400 240	
	Gochni	Chahi Abi and Dahri Barani Bhur	2 6 1	432 448	400	520 Abi 440 Dahri 380 360 240	
	Sarson	Chahi Abi and Dahri Barani Bhur	2	188	200	200 200 160 160	
	Taramira	Chahi Abi and Dahri Barani Bhur			240	200 160 160	
Chikot	Jowar	Chahi Abi and Dahri Barani Bhur			320	280 240 160	

STATEMENT XII—concluded.

1	2	3	4	5	6	7	8
			Experiments		Assumed yields		
Circle	Crops	Soils	Area in Acres.	Average yield in sers	At last Settlement.	Now.	Remarks
Chiknor—*concluded*	Bajra	Chahi			160	240	
		Abi and Dahri				160	
		Barani				160	
		Bhur					
	Maize	Chahi			400	200	
		Abi and Dahri					
		Barani					
		Bhur					
	Mung	Chahi				160	
		Abi and Dahri				120	
		Barani				120	
		Bhur					
	Mush	Chahi				120	
		Abi and Dahri					
		Barani					
		Bhur					
	Moth	Chahi			240	160	
		Abi and Dahri				160	
		Barani					
		Bhur					
	Chaula	Chahi			160	80	
		Abi and Dahri				80	
		Barani					
		Bhur					
	Til	Chahi			200	140	
		Abi and Dahri				140	
		Barani					
		Bhur					
	Cotton	Chahi	8	309	160	200	
		Abi and Dahri				140	
		Barani				100	
		Bhur					
	Wheat	Chahi			600	320	
		Abi and Dahri			400	360	
		Barani			280	280	
		Bhur				200	
	Barley	Chahi	14	514	600	400	
		Abi and Dahri			440	360	
		Barani			320	280	
		Bhur				240	
	Gram	Chahi			320	320	
		Abi and Dahri				240	
		Barani				200	
		Bhur					
	Gochni	Chahi			320	360	
		Abi and Dahri				280	
		Barani				200	
		Bhur					
	Sarson	Chahi			200	200	
		Abi and Dahri				160	
		Barani				160	
		Bhur					
	Taramira	Chahi			200	160	
		Abi an Dabri				160	
		Barani					
		Bhur					

2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Kharif													
Detail	Jowár	Bájrá	Maizé	Other cereals.	Mung	Másh	Moth	Guar	Chaula	Other pulses	Til	Sugarcane	Cotton	Indigo
1. Average area in acres	6	1	6	2		1					1		41	
2 Yield per acre in sers or cash value	240	240	320	Rs. 10		120					140		200	..
3 Total yield in sers	1,440	240	1,920			120					140		8,200	
4 Price in annas per maund	20	23	22			32					60		64	
5 Value of grain	45	9	66	20		6					18		820	
6 Value of straw	20	2									*			
7 Value of gross produce	65	11	66	20		6					13		820	
8 Government share at 16⅔ per cent.	†7	2	11	3		†1					2		†123	
9 Rate per acre harvested	1 2-8	2	1 13-4	1 8 0		1					2		3	
1 Average area in acres	67	19	135	107	3	49	42	25	5	4	13	627	2,663	124
2 Yield per acre in sers or cash value	246	240	320	Rs. 10	120	120	160	Rs 3	80	Rs 1·	140	640	160	Rs 10
3 Total yield in sers	16,080	4,560	43,200		360	5,880	6,720		400		1,820	401,280	429,280	
4 Price in annas per maund	20	23	22		30	32	22		20		60	45	64	
5 Value of grain	502	164	1,485	1,070	17	294	231	75	12	40	171	28,215	42,928	1,240
6 Value of straw	226	28			1	18	21		1					
7 Value of gross produce	728	192	1,485	1,070	18	312	252	75	13	40	171	28 215	42,025	1,240
8 Rate per acre of the Government share.	†0 14-0	1 7-0	2	1 8 0	†0-13 0	†0-4-0	0 3-0	*	†	†0-4 0	2-8-0	†2 9-0	†2 10 0	1 12 0
9 Total value of Government share	†59	27	270	160	†1	†12	8	*	†	†1	32	†1,607	†7,043	217
1 Average area in acres	91	21			1	1		1			6		25	
2 Yield per acre in sers or cash value	240	200			120	120		Rs 3			140		200	
3 Total yield in sers	21,840	4,200			120	120					840		5,000	..
4 Price in annas per maund	20	23			30	32					60		64	
5 Value of grain	682	151			6	6		3			79		500	
6 Value of straw	307	26											..	
7 Value of gross produce	989	177			6	6		3			79		500	
8 Government share at 25 per cent	†149	38			†1	† †1		*			20		†112	
9 Rate per acre harvested	1-10 2	1 13 0			1	1					3 5-4		4-7 8	
1 Average area in acres	6,832	16,074	133	196	783	256	192	2 306	38	1	723		3,913	
2 Yield per acre in sers or cash value.	200	160	200	Rs 10	120	120	160	Rs 3	80	Rs 10	140		160	
3 Total yield in sers	1,366,400	2,571,840	26,600		93,960	30,720	30,720		3,040		101,220		626 080	
4 Price in annas per maund	20	23	22		30	32	22		20		60		64	
5 Value of grain	42,700	92 425	914	1,960	4 404	1,536	1,056	6,918	95	10	9,489		62,608	
6 Value of straw	19,215	16 074			294	96	96		9					
7 Value of gross produce	61,915	108,499	914	1,960	4 698	1 632	1,152	6 918	104	10	9,489		62,608	
8 Government share at 25 per cent	†9,340	23,100	228	490	†734	†256	176	*	†16	†2	2 372		†14 087	
9 Rate per acre harvested	1 5-10	1-6 11	1-11-5	2-8 0	0 15 0	1	0 14-8		0 6 9	2	3 4-6		3-9-7	..
1 Average area in acres	49	2,207	3	2	58	1	41	366	25		16		95	..
2. Yield per acre in sers or cash value	100	140	200	Rs 10	120	120	160	Rs 3	80		140		100	
3 Total yield in sers	4,900	308,980	600		6 960	120	6 560		2,000	..	2,240		9,500	
4 Price in annas per maund	20	23	22		30	32	22		22		60		64	
5 Value of grain	153	11 104	21	20	326	6	225	1,098	63		210		950	
6 Value of straw	69	1,931			22		20		6		..		..	
7 Value of gross produce	222	13,035	21	20	348	6	245	1 098	69		210		950	
8 Government share at 25 per cent.	†33	2,776	5	5	†54	†1	†37	*	†11		52		†214	
9 Rate per acre harvested	0 10-9	1-4 1	1 10 8	2-8 0	0-14 11	1	0 14-5		0 7 0		3-4-0		2-4-1	
1 Average area in acres	7,045	18,322	277	307	845	308	275	2,698	68	5	759	627	6,757	124
8 Total yield in sers	1,410,660	2,889,820	72,820		101,400	36,960	44,000		5,440		106,260	401,280	1,078,080	
4 Price in annas per maund	20	23	22		30	32	22		20		60	45	64	
5 Value of grain	44 082	103 853	2,486	3,070	4,753	1 848	1,512	8 094	170	50	9 962	28,215	107,806	1,240
6 Value of straw	19,837	18 081			317	114	137		16					
7 Value of gross produce	63,919	121,914	2,486	3,070	5 070	1 962	1.649	8,094	186	50	9,962	28 215	107 806	1,240
8 Total value of Government share	†9,588	25,949	514	658	†700	†271	†221	*	†27	†3	2,478	1 607	†21,579	217
9 Rate per acre harvested	1 5-9	1 6-8	1-13-8	2-2-3	0-15-0	0 14-1	0-12-10		0 6-4	0 9 7	3-4-3	2 -9-0	3-3 1	1 12 9

* Whole produce deducted
† Value of the Government

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
			Rabi											
Gardens	Fodder	Others	Wheat	Barley	Gojra	Gram	Gochni	Pulses	Sarson	Taramira.	Gardens	Fodder	Others.	Total.
8	2	8	451	1,680	122	8	6	6	64					
Rs. 25	Rs 10	Rs 20	400	480	440	320	400	Rs 10	200		2:	25	62	2,528
			180,400	806,400	53,680	2,560	2,400				Rs 25	Rs 10	Rs 20	
200	20	160	32	22	27	23	28		12,800					
200	20	160	9,020	27,720	2,265	92	105	60	45					1,070,800
†38	*	27	1,057	3,780	252	8	11		900					
			10,077	31,500	2,517	100	116	60			250	250	1,240	43,561
4-2-0		3-8-0	1,503	†4,389	377	†14	17	†7	900	-				5,130
									†75		550	250	1,240	48,691
			3-5-4	2 9-10	3-1-5	1-12-0	2 13-4	1-2-8	1-2 9		92	*	207	6,890
											4-2-11		3 5 5	2-11-9
17	302	105	884	1,461	141	923	430	56	155	2	31	3	24	
Rs 25	Rs. 10	Rs 20	320	400	360	260	320	Rs 10	200	200	Rs 25	Rs. 10	Rs. 20	8,437
			282,880	584,400	50,760	258,440	137,600							
425	3,020	2,100	32	22	27	23	28		31,000					
425	3,020	2,100	14,144	20,089	2,142	9,288	6,020		45	400				
4-12 0	*	3 8-0	1,657	2,739	238	803	645	560	2,180	82				2,255,060
			15,801	22,828	2 360	10,096	6,665			20	775	30	480	1,37,717
81	*	367	2-1 0	†1-8-0	1 15-0	†1-7-0	1 12 0	560	2,180	20	775	30	480	6,882
			1,623	†2,191	273	†1,827	752	†0-12 0	†0-6-0	1-2-0	4 12 0	*	480	1,44,099
								†42	†58	2	147	*	3-8 0	1-15-5
	4												84	16,584
	Rs 10		14	18	10	35	20		10					
			360	400	380	320	360		200					
			5,040	7,200	3,800	11,200	7,200							257
	40		32	22	27	23	28		2,000					
	40		252	248	160	402	315		45					
	*		29	34	18	35	84		141					68,560
			281	282	178	437	349							
			63	†59	40	95	79		141					2,985
									†18					483
			4-8 0	3-4 5	4	2-11 5	3-15 2							3,468
									1-12-10					675
13	2 602	240	631	3,476	177	11,707	864	66	659	363	9	8	14	2-10-0
Rs. 15	Rs. 10	Rs 10	240	300	260	280	280	Rs 10	160	160	Rs 15	Rs 10	Rs 15	52,376
			151,440	1,042,800	46,020	3 277,960	241,920		105,440	58,080				
195	26,020	2,400	32	22	27	23	28		45	32				
195	26,020	2,400	7,572	35,848	1,941	117,802	10,584	660	7,414	2,904	135	80	210	9,774,240
49	*	600	887	4,888	216	10,244	1,134							4,37,878
			8,459	40,734	2,157	1,28,046	11,718	660	7,414	2,904	135	80	210	53,153
3 12-4		2 8-0	1,693	†8,514	485	†27,977	2,646	†110	†927	720	34	*	210	4,91,031
			3	2 7 2	2 11-1	2 6-3	3 1 0	1 10-8	1-6-6	2	3 12-5		52	94,820
4	67	11	8	253	5	542	6		25	58			3 11-5	1-13-0
Rs 15	Rs. 10	Rs 10	200	240	220	200	200		160	160				
			1,600	60,720	1,100	108,400	1,200		4,000	9,280			1	
60	670	110	32	22	27	23	28		45	32			Rs 15	3,843
60	670	110	80	2,087	46	3,696	52		281	464				
15	*	27	9	285	5	339	6							528,160
			89	2,372	51	4,235	58		281	464			15	21,937
3 12 0		2 7-3	20	†496	11	925	13		†35	116				2,692
			2-8-0	1 15-4	2-3-2	1-4-4	2 2-8						15	24,629
									1 6-5	2			4	4,850
42	29,770	364	1,988	6,888	455	18,215	1,326	128	918	423	62	86	100	67,3
			621,360	2,501,520	155,360	3,658,560	390,320		155,240	67,760				1,36,96,3
880	29,770	4,770	32	22	27	23	28		45	32				
850	29,770	4,770	31,068	85,990	6,554	1,31,480	17,076	1,280	10,916	3,388	1,460	360	1,945	6,44,07
178	*	1,021	3,630	11,726	729	11,434	1,830							67,84
			34,707	97,716	7,283	1,42,914	18,906	1,280	10,916	3,388	1,460	360	1,945	7,11,91
4-3-9		2-12 11	5,302	†15,649	1,166	†30,338	3,507	†159	†1,113	844	273	*	347	1,23,81
		2 10-8		2-4-1	2 9-8	2-4-6	2-10-4	1 3-10	1-3 6	1-15 11	4-6-5		3 7-8	1 13-5

· fodder

ire remaining after making the deductions detailed in paragraph 31.

Soils.	Detail	Kharif											
		Jowár	Bájra	Maize	Other cereals	Múng	Másh	Moth	Guar	Chaula.	Til	Cotton	Fodder
Chahi	1 Average area in acres	3	1	1	1			4			1	97	8
	2 Yield per acre in sers or cash value	280	240	320	Rs 10			160			140	200	Rs 10
	3 Total yield in sers	840	240	320				640			140	19,400	
	4 Price in annas per maund	20	23	22				22			60	64	
	5 Value of grain	26	9	11	10			22			13	1,940	80
	6 Value of straw	12	2					2					
	7 Value of gross produce	38	11	11	10			24			13	1,940	80
	8 Government share at 16 2/3 per cent	†4	2	2	2			†3			2	†291	*
	9 Rate per acre harvested	1-5 4	2 0 0	2 0-0	2 0 0			0 12 0			2-0-0	3 0-0	
Abi	1 Average area in acres		15		1	1		1	1			3	3
	2 Yield per acre in sers or cash value		240		Rs 10	120		160	Rs 3			200	Rs 10
	3 Total yield in sers		3,600			120		160				600	
	4 Price in annas per maund		23			30		22				64	
	5 Value of grain		129		10	6		6	3			60	30
	6 Value of straw		22										
	7 Value of gross produce		151		10	6		6	3			60	30
	8 Government share at 25 per cent		32		2	†1		†1	*			†13	*
	9 Rate per acre harvested		2-2 2		2 0-0	1 0-0		1 0-0				4 5 4	
Dahri	1 Average area in acres	65	96	2	9	9	1	3	17		8	41	37
	2 Yield per acre in sers or cash value	280	240	320	Rs 10	120	120	160	Rs 3		140	200	Rs. 10
	3 Total yield in sers	18,200	23,040	640		1,080	120	480			1,120	8,200	
	4 Price in annas per maund	20	23			30	32	22			60	64	
	5 Value of grain	569	828	22	90	51	6	16	51		105	820	370
	6 Value of straw	256	144			3		2					
	7 Value of gross produce	825	972	22	90	54	6	18	51		105	820	370
	8 Government share at 25 per cent	†121	207	5	22	†8	†1	†3	*		26	†184	*
	9 Rate per acre harvested	1 13-9	2 2 6	2-8 0	2 7 1	0 14-3	1 0-0	1 0 0			3-4-0	4-7 10	
Barani	1 Average area in acres	825	3,131	32	44	259	29	97	635	80	99	853	638
	2 Yield per acre in sers or cash value	200	160	240	Rs 10	120	120	160	Rs 3	80	140	160	Rs 10
	3 Total yield in sers	1,65,000	5,00,960	7,680		31 080	3,480	15,520		6,400	13,860	1,36 480	
	4 Price in annas per maund	20	23			30	32	22		20	60	64	
	5 Value of grain	5,156	18 00	264	440	1,457	174	533	1,905	200	1,298	13 648	6,380
	6 Value of straw	2,320	3 131			97	11	48		20			
	7 Value of gross produce	7 476	21,134	264	440	1,554	185	581	1,905	220	1,298	13,648	6,380
	8 Government share at 25 per cent	†1,096	4,501	66	110	†243	†29	†89	*	†33	324	†3,071	*
	9 Rate per acre harvested	1 5 3	1 7 0	2 0-0	2 8 0	0 15 0	1 0 0	0 14-8		0-6-7	3-4-4	3 9-7	
Bhur	1 Average area in acres	285	10 493	2	15	832	13	485	2 588	756	47	711	368
	2 Yield per acre in sers or cash value	100	140	200	Rs, 10	120	120	160	Rs 3	80	140	100	Rs 10
	3 Total yield in sers	28,500	1,469,020	400		99,840	1,560	77,600		60,480	6,580	71,100	
	4 Price in annas per maund	20	23			30	32	22		20	60	64	
	5 Value of grain	891	52,702	14	150	4,680	78	2,668	7,704	1,890	617	7,110	3,680
	6 Value of straw	400	9 181			312	5	242		189			
	7 Value of gross produce	1 291	61 973	14	150	4 992	83	2 910	7,704	2,079	617	7,110	3,680
	8 Government share at 25 per cent	†159	13,198	3	37	†780	†13	†445	*	†315	154	†1,600	†
	9 Rate per acre harvested	0-8-11	1-4-1	1 8 0	2 7 6	0 15-0	1-0-0	0 14 8		0-6-8	3-4-5	2-4 0	
Total of the Circle	1 Average area in acres	1 178	13,736	37	70	1,101	43	590	3,241	836	155	1,705	1 054
	3 Total yield in sers	212 540	1,900,860	9,040	..	132 120	5,160	94 400		66,880	21,700	235 780	10 540
	5 Value of grain	6 642	71,761	311	700	6,194	258	3,245	9,723	2,080	2,033	23,578	
	6 Value of straw	2 988	12 480			412	16	294		209			10 540
	7 Value of gross produce	9,630	84 241	311	706	6,606	274	3,539	9,723	2 289	2,033	23 578	
	8 Total value of Government share	†1,380	17,940	78	173	†1,032	†43	†541	*	†348	506	†5,159	*
	9 Rate per acre harvested..	1 2-9	1-4 11	2-0 10	2 7 6	3-15-0	1-0 0	0 14-8		0-6 8	3-4-3	3-0-5	

* Whole produce deducted
† Value of the Government

15	16	17	18	19	20	21	22	23	24	25	26	27	28
		Rabi.											
Gardens	Others	Wheat	Barley	Gojra	Gram	Goshni	Pulses	Sarson	Taramira	Gardens	Fodder	Others	Total.
7	15	296	1,568	145	3	2	13	79	3	23	2	156	2,446
Rs. 25	Rs 20	480	600	540	320	440	Rs 15	200	200	Rs 25	Rs 10	Rs 20	
		1,42,080	9,52 800	78,300	960	880		15,800	600				12,13,000
175	" 300	32 7,104	22 32,752	27 3,303	23 34	28 38	195	45 ,111	32 30	575	20	3,120	50,868
175	300	6832 7,936	4,466 37,218	367 3,670	3 37	4 42	195	1,111	30	575	20	3,120	5,688 56,556
28	50	1,184	†5,186	551	†5	6	†22	†93	5	96	*	520	8,053
4 2-3	3 5 4	4-0-0	3-4-3	3-12-9	1-10-8	3-0 0	1-11-1	1-2-10	1-10 8	4-2-9		3-5 4	3-5.0
			4		5	9		1					
			440		320	360		200				"	44
			1,750		1,600	3,240		200				"	... 11,280
			22		23	28							
			60		58	142		14					516
		...	8		65	15							50
			68		13	157		14					568
			†14		†13	35		†2					118
			3 8 0		2 9 7	3 14 3		2 0 0					2 9-0
	2	54	74	35									
	15	400	440	420	62 320	71 860	1 Rs 15	15 200	8 200				609
		21,600	32 120	1 4700	19,840	25,560							
		32	22		23	28		3,000	1,600				1,71,800
	30	1,080	1,104	620	713	1,118	15	45 211	32 80				7,899
	30	127 1 207	151 1,255	69 685	62 775	119 1 237	15						933
	8	270	†262	155	†169	279	†2	211	80				8,832
	4-0 0	5-0-0	3-8-8	4-6 10	2-11-7	*3-14 10	2 0 0	†26 1-11-9	20 2-8 0				1,768 2 14-0
10	34	443	992	261	1,150	539	17	352	330	81	1	9	10,900
Rs 15	Rs 10	240	800	260	280	280	Rs. 15	160	160	Rs 15	Rs 10	Rs 15	
		1,06,320	2,97,600	67,860	9,22 000	1,50,920		56 320	52 800				19,34,280
285	34	32 5,816	22 10,230	27 2 862	23 11,572	28 6,663	255	45 3,960	32 2,640	465	10	135	84,181
285	340	623	1 385	318	1,006	707							9,676
71	85	5,939 1,329	11,625 †2,430	3,180 715	12,578 †2,748	7,310 1 651	255 †42	3 960 †495	2,640 660	465 116	10 *	135 34	1,03,807 19,938
3-11 9	2 6-0	3-0 0	2-7-3	2-11 10	2-6-8	3 1-0	2 7 6	1-6-6	2-0-0	3 11 10		3-12-5	1-13-0
20	40	327	1,406	213	880	309	9	692	664	29	7	19	21,299
Rs. 15	Rs. 10	200	240	220	200	200	Rs. 10	160	160	Rs. 15	Rs 10	Rs 15	
		65,400	3 37,440	46,860	1,92,000	61,800		1,10,720	1,06,240				27,35 540
300	490	32 3,270	22 11,600	27 1,978	23 6,900	28 2,704	90	45 7,785	32 5,812	435	70	285	123,553
300	490	383	1,582	219	600	290							13,493
75	125	3,653	13 182	2,197	7,500	2,994	90	7,785	5 312	435	70	285	136,956
3-12 0	2 7-10	817 2-8-0	†1,755 1 15-4	494 2-5-1	†1,639 1-11-4	676 2-3-0	†15 1-10-8	†973 1 6-6	1,328 2 0-0	109 3 12 2	†	71 3 11 9	25,778 1-3-4
46	100	1,120	4,063	654	2,180	930	40	1,139	1,005	83	10	184	35 300
" 760	1,160	3,35,400 16,770	16,21,720 55,746	2,07,720 8,838	5,36,400 19 272	2,42,400 10,605	555	186,040 13 081	161,240 8,062	1 475	100	3 540	60,65,400 276 969
760	1,160	1,965	7,602	978	1,676	1,135							29,750
175	265	18,735	63,348	9,936	20,953	11,740	555	13,081	8,062	1,475	100	3,540	308,719
8 12-3	2-10-4	3,600 3-3 5	†10,647 2-9 11	1,915 2-14-10	†4,574 2-1 6	2,647 2-13-7	†81 2-0-5	†1,589 1-6-4	2,013 2-0 0	321 3-13 11	*	625 3 6 4	55 650 1 9-3

for fodder
share remaining after making the deductions detailed in paragraph 31

1	2	3	4	5	6	7	8	9	10	11	12	13	14
		KHARIF											
Soil	DETAIL	Jowár	Bájra	Maize	Other cereals	Múng	Másh	Moth.	Guár	Chaula.	Til	Cotton	Fodder
CHAHI.	1 Average area in acres	3	2	11	2				1		4	80	16
	2 Yield per acre in sers or cash value	280	240	320	Rs 10				Rs 3		140	240	Rs 10
	3 Total yield in sers	840	480	3,520							560	19,200	
	4 Price in annas per maund ..	20	23	22							60	64	
	5 Value of grain	26	17	121	20				3		52	1,920	160
	6 Value of straw	12	3										
	7 Value of gross produce	38	20	121	20				3		52	1,920	160
	8 Government share at 16¼ per cent	†4	3	20	3				*		9	†288	*
	9 Rate per acre harvested	1 5-4	1-8-0	1 13 1	1 8 0						2-4-0	3 9 7	
DAHRI.	1 Average area in acres	93	332	1	2	25	3	7	21	2	32	173	86
	2 Yield per acre in sers or cash value	280	240	320	Rs 10	160	160	200	Rs 3	120	140	240	Rs. 10
	3 Total yield in sers	26,040	79,680	320		4,000	480	1,400		240	4,480	41,520	
	4 Price in annas per maund	20	23	22		30	32	22		20	60	64	
	5 Value of grain	814	2,863	11	20	188	24	48	63	8	420	4,152	360
	6 Value of straw	366	498			12	2	4		1			
	7 Value of gross produce	1,180	3,361	11	20	200	26	52	63	9	420	4,152	360
	8 Government share at 25 per cent.	†178	716	3	5	†31	†4	†8	*	†1	105	†934	*
	9 Rate per acre harvested	1 14-7	2 2 0	3 0-0	2 8 0	1 3 10	1 5 4	1 2-3		0 8-0	3 4 6	5-6-5	
BARANI.	1 Average area in acres	2,323	3 634	21	71	548	89	173	649	48	476	1,176	712
	2 Yield per acre in sers or cash value	260	220	240	Rs 10	160	160	200	Rs 3	120	140	200	Rs 10
	3 Total yield in sers	603,980	799,480	5 040		87,680	14,240	34,600		5,760	66,640	235,200	
	4 Price in annas per maund	20	23	22		30	32	22		20	60	64	
	5 Value of grain	18,874	28,731	173	710	4,110	712	1,189	1,947	180	6,248	23,520	7,120
	6 Value of straw	8,493	4,997			274	44	108		18			
	7 Value of gross produce	27,367	33 728	173	710	4 384	756	1,297	1,947	198	6,248	23,520	7,120
	8 Government share at 25 per cent	†4,129	7,183	43	178	†695	†119	†198	*	†30	1,562	†5 296	*
	9 Rate per acre harvested	1 12-5	1 15 8	2 0-0	2 8 1	1 4 0	1 5-5	1 2 4		0 10 0	3-4 6	4-8 1	
BAUR.	1 Average area in acres	94	2 007		17	175	2	118	377	82	25	235	50
	2 Yield per acre in sers or cash value	140	200		Rs 10	160	160	200	Rs 3	120	140	120	Rs. 10
	3 Total yield in sers	13,160	419,400			28,000	320	23,600		9,840	3,500	28,200	
	4 Price in annas per maund	20	23			30	32	22		20	60	64	
	5 Value of grain	411	15,072		170	1,312	16	811	1,131	308	328	2,820	500
	6 Value of straw	185	2,621			88	1	74		31			
	7 Value of gross produce	596	17,693		170	1,400	17	885	1,131	339	328	2,820	500
	8 Government share at 25 per cent	†90	3,708		42	†219	†3	†135	*	†51	82	†635	*
	9 Rate per acre harvested	0-15-4	1 12 9		2 8 1	1-4-0	1 8 0	1 2 4		0-9-11	3-4-6	2-11 3	..
TOTAL OF THE CIRCLE	1 Average area in acres	2 513	6,065	33	92	748	94	298	1,048	132	537	1,664	814
	3 Total yield in sers	644,020	1 299,040	8,880		119,680	15,040	59,600		15,840	75,180	324,120	
	5 Value of grain	20,125	46,683	305	920	5,610	752	2,048	3,144	496	7,048	32,412	8,140
	6 Value of straw ..	9,056	8,119			374	47	186		50			
	7 Value of gross produce	29,181	54,802	305	920	5,984	799	2,234	3,144	546	7,048	32,412	8,140
	8 Total value of Government share	†4 401	11,870	66	228	†935	†126	†341	*	†82	1,758	†7,153	*
	9 Rate per acre harvested	1 12-0	1-14-9	2-0-0	2 7-8	1 4-0	1-5 5	1-2 4		0 9-11	3 4-5	4-4 9	

* Whole produce deducted
† Value of the Government

15	16	17	18	19	20	21	22	23	24	25	26	27	28
					Rabi								
Gardens	Others	Wheat	Barley	Gojra	Gram	Goohni	Pulses	Sarson	Tóramira	Gardens	Fodder	Others	Total
16	26	285	976	59	5	4	30	78	4	30	24	99	1,755
Rs. 25	Rs 20	560	680	620	400	480	Rs 15	200	200	Rs. 25	Rs 10	Rs 20	
		159,600	663,680	36,580	2,000	1,920		15,800	800				904,780
		32	22	27	23	28		45	32				
400	520	7,980	22,814	1,543	72	84	450	1,097	40	750	240	1,980	40,289
		935	3,111	170	6	9							4,246
400	520	8,915	25,925	1,713	78	93	450	1,097	40	750	240	1,980	44,535
67	87	1,330	†3,612	257	†11	14	†50	†91	7	125	*	330	6,308
4-3 0	3-5-6	4-10 8	3 11 3	4-5-8	2-3 2	3 8-0	1-10-8	1-2-8	1-12 0	4-2-8		8-5-4	3-9-5
1	3	120	272	67	101	179	10	13	84	2		1	1,570
Rs 15	Rs. 10	440	480	460	400	440	Rs 15	200	200	Rs 15		Rs 15	
		52,800	130,560	26,220	40,400	78,760		2,600	16,800				506,300
		32	22	27	23	28		45	32				
15	30	2,640	4,488	1,106	1,452	3,446	150	183	840	30		15	23,866
		309	612	123	126	369							2,422
15	30	2,949	5,100	1,229	1,578	3,815	150	183	840	30		15	25,788
4	8	660	†1,066	276	†345	862	†25	†23	210	8		4	5,476
4-0-0	2 10 8	5 8 6	3 14-0	4 13-6	3 6-8	4-13 1	2 [illegible]	1 12-4	2-8-0	4 0 0		4-0 0	3-7-10
8	45	316	1,771	266	1 326	407	24	430	547	7		2	15,070
Rs 15	Rs 10	280	360	320	360	320	Rs 15	160	160	Rs 15		Rs 15	
		88,480	637,560	85,120	477 360	130,240		68,800	87,520				3,427,700
		32	22	27	23	28		45	32				
120	450	4,424	21,910	3,591	17,155	5 698	380	4,838	4 376	105		45	156,592
		518	2 959	399	1,492	610							19,942
120	450	4,942	24 905	3,990	18,647	6 308	380	4 838	4,376	105		45	176,534
30	112	1,106	†5 205	898	4,074	1,424	†80	†605	1,094	26		11	34,068
3-12-0	2 7 10	3 8-0	2 15 0	3 0-0	3 1-2	3-8-0	2 8-0	1-6 6	2-0 0	3 11-5		3 10 8	2 4-2
3	8	57	382	46	179	152	1	176	329				4,605
Rs 15	Rs 10	200	240	220	240	240	Rs 15	160	160				
"		11,400	91,680	10,120	42,960	36,480		28,160	52 640				789,460
		32	22	27	23	28		45	32				
45	80	570	3,151	427	1,544	1,596	15	1,980	2,632				34,919
		67	430	47	134	171							3,849
45	80	637	3,581	474	1,678	1,767	15	1,980	2,632				38,768
11	20	142	†748	107	†367	399	†2	†248	658				7,727
3-10-8	2-8-0	2-7-10	1 15-4	2-5-3	2 0 10	2-10-0	2-0-0	1-6-7	2-0-0				1-10 10
28	82	778	3,401	428	1,611	742	65	697	964	39	28	103	28,000
		312,280	1,523,480	158,040	582,720	247,400		115 160	157,760				5,638,240
580	1,080	15 614	52,369	6,667	20,223	10,824	975	8 098	7 888	885	240	2,040	255,166
...	-	1,829	7,142	789	1,758	1,159							30,459
580	1 080	17,443	59 511	7 406	21,981	11,983	975	8 098	7,888	885	240	2,040	285,625
112	227	3,238	†10 681	1 538	†4,797	2,699	†137	†967	1,969	159	*	345	53,579
4 0-0	2 12-3	4 2 8	3-2 0	3 9 6	2-15-8	3-10-2	2 1 9	1-6-2	2 0-8	4-1-3		3-5-7	2-5 3

r fodder

are remaining after making the deductions detailed in paragraph 21

1	2	3	4	5	6	7	8	9	10	11	12	13	14
		Kharif											
Soil	Detail	Jowar	Bajra	Maize	Other cereals	Mung	Mash	Moth	Guar	Chaula	Til	Cotton	Fodder
Ohari	1 Average area in acres	1										4	
	2 Yield per acre in sers or cash value	360										260	Rs
	3 Total yield in sers	360										1,040	
	4 Price in annas per maund	20										64	"
	5 Value of grain	11										104	
	6 Value of straw	5											
	7 Value of gross produce	16										104	
	8 Government share at 16⅔ per cent	†2										†16	*
	9 Rate per acre harvested	2										4	
Abi	1 Average area in acres	24	69		2	5	1	4	8			16	1
	2 Yield per acre in sers or cash value	320	240		Rs 10	160	160	200	Rs 3			240	Rs 1
	3 Total yield in sers	7,680	16,560			800	160	800				3,840	
	4 Price in annas per maund	20	23			30	32	22				64	
	5 Value of grain	240	595		20	38	8	28	24			384	12
	6 Value of straw	108	193			2	1	3					
	7 Value of gross produce	348	698		20	40	9	30	24		"	384	12
	8 Government share at 25 per cent.	†51	149		[illegible]	†6	†1	†5	*			†87	*
	9 Rate per acre harvested	2 2-0	3-2 7		2 8 0	1 3-2	1	1 4 0				5 7 0	
Dahri	1 Average area in acres	5	14			1							
	2 Yield per acre in sers or cash value	320	240			160							
	3 Total yield in sers	1,600	3,360			160							"
	4 Price in annas per maund	20	23			30							
	5 Value of grain	50	121			8							
	6 Value of straw	23	21			1							
	7 Value of gross produce	73	142			9							
	8 Government share at 25 per cent.	†10	30			†1							
	9 Rate per acre harvested	2	2 2 7			1							
Superior Barani	1 Average area in acres	1,524	2,496	14	97	168	63	86	826	14	264	1,342	1,036
	2 Yield per acre in sers or cash value	280	240	240	Rs 10	160	160	200	Rs 3	120	140	220	Rs 10
	3 Total yield in sers	4,26,720	5,99,040	3,360		26,880	10,080	17 200		1,680	36 960	2,95,240	
	4 Price in annas per maund	20	23	22		3	32	22		20	60	64	
	5 Value of grain	13 435	21 528	116	970	1,260	504	591	2 478	52	3 168	29,524	10,360
	6 Value of straw	6 001	3 744			84	92	54		5			
	7 Value of gross produce	19,336	25 272	116	970	1 314	596	645	2 478	57	3,465	29,524	10,360
	8 Government share at 25 per cent	†2,634	5,382	29	243	†210	†84	†99	*	†9	866	†6,643	*
	9 Rate per acre harvested	1 13-9	2 2 6	2 1 2	2 8 1	1 4-0	1 5-4	1-2 5		0 10 3	3-4 6	4 15 2	
Bhur	1 Average area in acres	64	859	1	1	56	4	40	270	37	9	151	85
	2. Yield per acre in sers or cash value.	200	200	200	Rs 10	160	160	200	Rs 3	120	140	140	Rs 10
	3 Total yield in sers	12,800	1,71,800	200		8,960	640	9,600		4,440	1,260	21,140	
	4 Price in annas per maund	20	23	22		30	32	22		20	60	64	"
	5 Value of grain	400	6,174	7	10	420	32	397	810	139	118	2,114	360
	6 Value of straw	180	1 074			28	2	31		14			
	7 Value of gross produce	580	7 248	7	10	448	34	368	810	153	118	2 114	360
	8 Government share at 25 per cent.	†85	1,544	2	2	†70	†5	†56	*	†23	30	†474	*
	9 Rate per acre harvested	1 5-4	1-12 9	2	2	1 4-0	1 4 0	1 2-7		0 9 11	3 5-4	3 2-5	
Total of the circle.	1 Average area in acres	1 618	3,438	15	100	230	68	139	1,104	51	273	1,513	1,087
	3 Total yield in sers	4,49,160	7,90,760	3,560		36,800	10,880	27,800		6,120	38,220	3,21,260	
	4 Price in annas per maund	20	23	22		30	32	22		20	60	64	
	5 Value of grain	14 036	28 418	123	1,000	1,726	544	956	3,312	191	3,583	32,128	10,670
	6 Value of straw	6,317	4 942			115	35	87		16			
	7 Value of gross produce	20 353	33,360	123	1,000	1 841	579	1 043	33 12	210	3 583	32,126	10,670
	8 Total value of the Government share	†2,982	7,105	31	250	†287	†90	†160	*	†32	896	†7,222	*
	9 Rate per acre harvested	1 13-6	2 1 1	2 1-1	2 8 0	1 4 0	1-5-2	1 2-5		0 10-0	3-4-6	4-12-4	

* Whole produce deducted
† Value of the Government

15	16	17	18	19	20	21	22	23	24	25	26	27	28
		Rabi											
Gardens	Others	Wheat.	Barley	Gojra.	Gram	Gochni	Pulses	Sarson	Taramira.	Fodder	Gardens	Others	Total.
15	12	105	550	36	4	5		52		24	22	42	873
Rs 25	Rs 20	520	640	580	480	520		200		Rs 10	Rs 25	Rs 20	
		54,600	3,52,000	20,880	1,920	2,600		10,400					4,43,800
		32	22	27	23	28		45					
375	240	2,730	12,100	681	69	114		731		240	550	840	18,995
375	240	320	1,650	98	6	12							2,091
63	40	3,050	13,750	978	75	126		731		240	550	840	21,086
		435	†1,816	147	†10	18		†61		*	92	140	2,860
4-3-2	3 5-4	4 5-4	3-4-10	1 1 4	2-8-0	3-9 7		1 2-9			4-2 11	8-5-4	3-4 5
1		46	46	6	53	42		9	4			1	349
Rs 25		400	480	440	440	440		200	200			Rs 20	
		18,400	22,080	2,640	23,320	18,480		1,800	800				1,17,360
25		32	22	27	23	28		45	32				
		920	759	111	888	808		127	40			20	5,105
25		108	103	12	73	87					"		599
6		1,028	862	123	911	895		127	40			20	5,704
		230	†171	28	†188	202		†16	10			5	1,160
6		5	3 11-6	4-10-8	3-8-9	4 12 11		1 12-5	2-8-0			5	3-5 2
		6		1	1	4		1					33
		400		400	440	380		200					...
		2,400		400	440	1,520		200					9,980
		32		27	23	28		45					409
		120		17	13	67		13					69
		14		2	1	7							478
		134		19	14	74		13					97
		30		4	†3	17		†2					2 15 0
		5		4	3	4 4 0		2	"				
15	30	519	2,292	232	1,479	1,424	18	592	252	1	3	16	14,812
Rs 15	Rs. 15	320	400	360	400	360	Rs 10	160	160	Rs 10	Rs 15	Rs 15	
		1,66,080	9,16,800	83,520	5,91,600	5,12,640		94,720	40,320				38,22,840
225	595	32	22	27	23	28		45	32				
		8,304	31,515	3,524	21,261	22,428	180	6,660	2,016	10	45	240	1,81,176
225	585	973	4,298	392	1,849	2,403							19,835
56	146	9,277	35,813	3,916	23,110	24,831	180	6,660	2,016	10	45	240	2,01,011
		2,076	†7,091	831	†4,784	5,607	†30	†833	504	*	11	60	38,478
3 11 9	3 11 11	4	3 1 6	3 12 9	3-3 9	3 15 0	2 8-0	1 6-6	2		3-10-8	3 12-0	2-9 7
4	8	41	276	49	200	78	4	97	128			2	2,426
Rs 15	Rs 10	240	280	260	240	240	Rs 10	160	160			Rs 10	
		9,840	77,280	12,740	48,000	18 720		15,520	20,480				4,33,620
60	80	32	22	27	23	28		45	32				
		492	2,657	537	1,725	819	40	1,091	1,024			20	19,486
60	80	58	362	60	150	88							2,047
15	20	550	3,018	597	1 875	907	40	1,091	1,024			20	21,533
		123	†598	134	†368	205	†7	†136	256			5	4,180
3 12 0	2-8-0	3	2 2-8	2 11 9	1 15-0	2 10 0	1 12 0	1 6-5	2			2 8-0	1-11 7
35	59	717	3,164	324	1,787	1,553	22	751	384	25	25	61	18 493
		2,51,320	13,68,160	1,20,180	6,65,200	5,53,960		1,22,620	61,600				48,27,600
695	905	3-	22	27	23	28		45	32				
		12,566	47,041	5,070	23,906	24,236	220	8,622	3,080	250	595	1,120	2,25,171
695	905	1,478	6,413	564	2,079	2,597							24 641
140	200	14,039	53,444	5 634	25,985	26,883	220	8,622	3,080	250	595	1,120	2,49,812
		2,914	†9,675	1,194	†5,373	6,050	†37	†1,048	770	*	103	210	46,775
4	3 7 10	4-1-0	3 0-11	3-11 0	3 1-6	3-14-4	1-10 11	1 6 4	2		4-1-11	3-7-1	2 8-6

for fodder

share remaining after making the deductions detailed in paragraph 31.

1	2	3	4	5	6	7	8	9	10	11	12	13	14
		KHARIF											
SOIL	DETAIL	Jowar	Bajra	Maize	Other cereals	Mung	Masb	Moth	Guar	Chaula.	Til	Cotton	Hemp
CHAHI	1 Average area in acres												
	2 Yield per acre in sers or cash value												
	3 Total yield in sers												
	4 Price in annas per maund												
	5 Value of grain												
	6 Value of straw												
	7 Value of gross produce												
	8 Government share at 16¾ per cent												
	9 Rate per acre harvested												
ANI	1 Average area in acres	6	2						1		1	1	
	2 Yield per acre in sers or cash value	280	240						Rs 3		140	200	
	3 Total yield in sers	1,680	480								140	200	
	4 Price in annas per maund	20	23								60	64	
	5 Value of grain	52	17						3		13	20	
	6 Value of straw	24	3										
	7 Value of gross produce	76	20						3		13	20	
	8 Government share at 25 per cent	†11	4						*		3	†5	
	9 Rate per acre harvested	1-13 4	2 0 0								3-0 0	5-0-0	
DAIMI	1 Average area in acres	17	7		3	1			1		2	2	
	2 Yield per acre in sers or cash value	280	240		Rs 10	160			Rs 8		140	200	
	3 Total yield in sers	4,760	1,680			160					280	400	
	4 Price in annas per maund	20	23			30					60	64	..
	5 Value of grain	149	60		30	8			3		26	40	
	6 Value of straw	67	10			1							..
	7 Value of gross produce	216	70		30	9			3		26	40	
	8 Government share at 25 per cent	†32	15		8	†1			*		6	9	
	9 Rate per acre harvested	1 14-1	2-2-3		2 10 8	1 0 0					3-0-0	4-8-0	
BARANI	1 Average area in acres	1,160	1,035	85	39	96	29	10	151		181	607	
	2 Yield per acre in sers or cash value.	240	160	200	Rs 10	120	120	160	Rs. 3	80	140	140	
	3 Total yield in sers	278,400	165,600	7,000		11,520	3,480	1,600		160	25,340	84,980	
	4 Price in annas per maund	20	23	22		30	32	22		20	60	64	..
	5 Value of grain	8,700	5,951	241	390	540	174	55	453	5	2,376	8,498	
	6 Value of straw	3,915	1,035			36	11	5		1			
	7 Value of gross produce	12 615	6,986	241	390	576	185	60	453	6	2,376	8,498	
	8 Government share at 25 per cent.	†1,849	1,488	60	98	†90	†29	†9	*	†1	594	1 912	
	9 Rate per acre harvested	1-9-8	1 7 0	1-11 5	2 8 2	0-15-0	1 0 0	0 14-5		0-8-0	3-4-6	3-2-5	
BHUR.	1 Average area in acres	10	74			5		5	20	1		12	
	2 Yield per acre in sers or cash value	160	160			120		160	Rs. 3	80		100	
	3 Total yield in sers	1,600	11,840			600		800		80		1,200	
	4 Price in annas per maund	20	23			30		22		20		64	
	5 Value of grain	50	426			28		28	60	2		120	
	6 Value of straw	23	74			2		2					..
	7 Value of gross produce	73	500			30		30	60	2		120	
	8 Government share at 25 per cent	†10	107			†5		†5	*			†27	
	9 Rate per acre harvested	1 0-0	1-7-2			1 0 0		1-0-0				2-4-0	..
TOTAL OF THE CIRCLE	1 Average area in acres	1,193	1,118	35	42	102	29	15	173	3	184	622	
	2 Total yield in sers	286,440	179,600	7,000		12,280	3,480	3,400		240	25,760	86,780	..
	3 Price in annas per maund	20	23	22		30	32	22		20	60	64	
	4 Value of grain	8,951	6,454	241	420	576	174	83	519	7	2,415	8,678	
	5 Value of straw	4 029	1,122			39	11	7		1			
	6 Value of gross produce	12,980	7,576	241	420	615	185	90	519	8	2,415	8,678	
	7 Total value of Government share	†1,902	1 614	60	105	†96	†29	†14	*	†1	603	†1,953	
	8 Rate per acre harvested	1 9 6	1 7 1	1 11-5	2-8 4	0 15 0	1 0-0	0-14-1		0-5-4	3-4-5	3-2 8	

* Whole produce deducted for fodder

† Value of the Government share remaining

15	16	17	18	19	20	21	22	23	24	25	26	27	28
			Rabi.										
Fodder	Gardens	Others	Wheat	Barley	Gojra.	Gram	Goohni	Sarson	Taramira	Fodder	Gardens	Others	Total.
		2	2	36	3					3	2	10	58
		Rs 20	320	400	360					Rs 10	Rs 25	Rs 20	
			640	14,400	1,080								16,120
			32	22	27								
		40	32	495	46					30	50	200	893
		"	4	68	5								77
		40	36	563	51					30	50	200	970
		7	5	†74	6					*	8	33	135
		3-8-0	2-8-0	2 0 10	2-10 8						4-0-0	3 4 10	2-5-3
5			41	10	1	7	62	4				52	193
Rs 10			360	360	360	320	360	200				Rs 20	
			14,760	3,600	360	2,240	22,320	800					46,580
			32	22	27	23	28	45					
50			738	124	15	80	976	56				1,040	3,184
			87	17	2	7	105						244
50			824	141	17	87	1,081	56				1,040	3,428
*			184	†28	4	†18	244	†7				260	768
			4-7 10	2-12-10	4 0 0	2-9 2	3-15-0	1 12-0				5-0 0	3-15 10
16			19	3	9	3	24	1					
Rs 10			360	360	360	320	360	200				20	128
			6,240	1,080	3,240	960	8,640	200				Rs 20	"
160			32	22	27	23	28	45					28,240
			342	37	137	35	376	14					
160			40	5	15	3	40					400	1,819
*			382	42	152	38	418	14					181
			86	†8	34	†8	94	†2				400	2,000
												100	403
			4-8-5	2-10-8	3 12-5	2 10-8	3 14-8	2-0-0				5-0-0	3-2-6
707	2	23	446	313	114	581	1,358	150	23	1		82	7,145
Rs. 10	Rs. 15	Rs. 10	280	280	280	240	280	160	160	Rs 10		Rs 15	
			124,880	87,640	31,920	139,440	380,240	24,000	3,680				1,369,880
7,070	30	230	32	22	27	23	28	45	32				
"			6,244	3,018	1,347	5,011	16,695	1,687	184	10		1,230	70,074
7,070	30	230	732	411	150	436	1,762						8,514
*	8	57	6,976	3,424	1,497	5,447	18,417	1,687	184	10		1,230	78,588
			1,561	†678	337	†1,128	4,159	†211	46	*		308	14,623
	4-0 0	2-7 8	3-8-0	2 2-8	2-15-4	1 15 1	3 1-0	1-6-6	2-0-0			3-12-1	2-0-9
7			1	6	3	23	20	1	1				
Rs. 10			200	240	320	200	200	160	160				189
			200	1,440	660	4,600	4,000	160	160				
70			32	22	27	23	28	45	32				27,340
			10	50	28	185	175	11	8				
70			1	7	3	14	19						1,231
*			11	57	31	179	194	11	8				145
			3	†11	7	†37	44	†1	2				1,376
			3 0-0	1-13-4	2 5-4	1-9-9	2-3-2	1-0-0	2-0 0				259
													1 5-11
736	2	24	509	368	180	614	1,464	156	24	4	2	164	7,713
"	"		147,320	108,160	37,260	147,240	415,200	25,160	3,840				1,488,160
7,350	30	270	32	22	27	23	28	45	32	"			
			7,366	3,718	1,573	5,291	18,164	1,768	192				
7,350	30	270	863	508	175	460	1,946			40	50	2,870	77,201
*	8	64	8,229	4 227	1,748	5,751	20,110	1 768	192				9,161
"	4-0-0	2-10-8	1,839	†799	380	†1,191	4,541	†221	48	40	50	2,870	86 362
			3 9-10	2 2 9	3-0-0	1-15-0	3-1-8	1 6-8	2 0-0	*	8	701	16 188
											4 0 0	4-1-5	2-1-7

after making the deductions detailed in paragraph 31.

STATEMENT XIV —Total Cash Rents paid by Tenants-at-will in Villages finally attested and inspected for assessment.

1	2	3	4	5	6	7	8	9	10	11	12
		Cash rents paid on single classes of land			Cash rents paid on holdings containing more than one class of soil			Total cash rents paid			
Circle	Class of land or soil.	Area	Rent	Rate per acre	Area	Rent	Rate per acre	Area	Rent.	Rate per acre	Remarks
				Rs a			Re a			Re a	
Bangar	Chahi	168	789	4 14	121	537	4 7	284	1,326	4 11	Nahr includes chahi nahr and narmo include chiknot
	Nahri	454	1,890	4 3	231	881	3 13	685	2 771	4 0	
	Narmot	1,920	7,150	3 12	805	2,717	3 6	2,725	9,867	3 10	
	Magda	264	1,001	3 13	241	828	3 7	505	1,829	3 10	
	Bhur	479	968	2 0	90	163	1 13	569	1,131	2 0	
	Total	3,280	11,798	3 10	1,488	5,126	3 7	4,768	16 924	3 9	
Bhuden	Chahi	257	1,164	4 9	220	1,128	5 2	477	2,292	4 13	
	Abi	10	73	7 5	17	140	8 4	27	213	7 14	
	Dahri	27	145	5 6	50	303	6 1	77	448	5 13	
	Narmot	180	608	3 6	104	397	3 13	284	1,005	3 9	
	Magda	346	1,178	3 7	229	887	3 14	575	2,065	3 9	
	Bhur	1,583	3,234	2 1	412	953	2 5	1,995	4,187	2 2	
	Uncultivated	5	7	1 6	14	22	1 9	19	29	1 8	
	Total	2,408	6,409	2 11	1,046	3,830	3 10	3,454	10,239	2 15	
Dahar Mitha	Chahi	305	2,268	7 7	287	2,886	8 5	592	4,649	7 14	
	Dahri	89	629	7 1	424	3,339	7 14	513	3,968	7 12	
	Narmot	639	2,571	4 0	699	3,146	4 8	1,338	5,717	4 4	
	Magda	601	3,899	5 10	1,012	6,388	6 5	1,613	9,787	6 1	
	Bhur	391	1,230	3 2	493	1,726	3 8	884	2,956	3 6	
	Total	2 025	10,092	5 0	2,915	16,985	5 13	4,940	27,077	5 8	
Dahar Kheri	Chahi	151	1,065	7 1	202	1,414	7 0	353	2 479	7 0	
	Abi	4	25	6 4	1	6	6 3	5	31	6 3	
	Dahri	32	214	6 11	17	113	6 10	49	327	6 11	
	Narmot	903	5,900	6 9	627	4,075	6 8	1,530	9,975	6 8	
	Magada	143	938	6 9	168	1,092	6 8	311	2 030	6 8	
	Bhur	48	284	5 15	79	464	5 14	127	748	5 14	
	Total	1 281	8 426	6 9	1 094	7,164	6 9	2,375	15,590	6 9	
Chiknot	Chahi	2	5	2 8	1	3	2 12	3	8	2 11	
	Narmot	102	365	3 9	33	128	3 14	135	493	3 10	
	Total	104	370	3 9	34	131	3 14	138	501	3 10	
Total Tahsil	Chahi	878	5,286	6 0	831	5 468	6 9	1,709	10,754	6 4	
	Nahri	454	1,890	4 3	231	881	3 13	685	2,771	4 1	
	Abi	14	98	7 0	18	146	8 2	32	244	7 10	
	Dahri	148	988	6 11	491	3 755	7 10	639	4 743	7 7	
	Narmot	3,744	16,594	4 7	2 268	10,463	4 10	6,012	27,0	4 8	
	Magda	1,354	6,516	4 13	1,650	9 195	5 9	3,004	15,711	5	
	Bhur	2,501	5,716	2 5	1,074	3,306	3 1	3,575	9 022	2 8	
	Uncultivated	5	7	1 6	14	22	1 9	19	29	1 8	
	Total	9,098	37,095	4 1	6,577	33 236	5 1	15 675	70,331	4 8	

STATEMENT XV.—Normal Cash Rents.

1	2	3	4	5	6	7	8	9	10	11	12
Circle	Soil	Simple Rents			Lump rents resolved			Total Rents			Remarks.
		Area	Rent	Rate per acre	Area	Rent.	Rate per acre	Area	Rent	Rate per acre	
			Rs	Rs A.		Rs A.	Rs A P		Rs A.	Rs A	
Bangar	Chahi	81	347	4 5	45	163 0	4 1 0	126	530 0	4 3	Nahri includes Chahi-Nahri and Narmot includes Chiknot
	Nahri	228	967	4 4	104	416 0	4 0 0	332	1,383 0	4 3	
	Narmot	1,271	4,569	3 13	322	1,167 0	3 10 0	1,593	6,036 0	3 13	
	Magda	150	554	3 11	120	420 0	3 8 0	270	974 0	3 10	
	Bhur	401	747	1 14	78	138 0	1 12 6	479	885 0	1 14	
	Uncultivated				3	3 0	1 0 0	3	3 0	1 0	
	Total	2,131	7,484	3 8	672	2,327 0	3 7 5	2,803	9,811 0	3 8	
Bhuder	Chahi	124	679	5 8	166	865 0	5 13 0	290	1,644 0	5 11	
	Abi	4	24	6 0	3	19 0	6 5 0	7	43 0	6 2	
	Dahri	15	80	5 5	43	242 0	5 10 0	58	322 0	5 9	
	Narmot	130	468	3 9	86	322 0	3 12 0	216	785 0	3 10	
	Magda	259	921	3 9	132	495 0	3 12 0	391	1,416 0	3 10	
	Bhur	1,356	2,602	1 15	303	619 0	2 0 8	1,659	3,221 0	1 15	
	Uncultivated				5	5 0	1 0 0	5	5 0	1 0	
	Total	1,888	4,769	2 9	738	2,667 0	3 9 10	2,626	7,436 0	2 13	
Dahar Mitha	Chahi	198	1,507	7 10	134	1,039 0	7 12 0	332	2,546 0	7 11	
	Dahri	83	573	6 14	61	427 0	7 0 0	144	1,000 0	6 16	
	Narmot	355	1,376	3 14	88	346 0	3 15 0	443	1,722 0	3 14	
	Magda	191	827	4 5	128	560 0	4 6 0	319	1,387 0	4 6	
	Bhur	275	674	2 7	104	260 0	2 8 0	379	934 0	2 7	
	Total	1,102	4,957	4 8	515	2,632 0	5 1 9	1,617	7,589 0	4 11	
Dahar Khari	Chahi	100	722	7	172	1,236 0	7 3 0	272	1,958 0	7 3	
	Abi	4	25	6 4	1	6 4	6 4 0	5	31 4	6 4	
	Dahri	36	239	6 10	15	99 0	6 10 0	51	338 0	6 10	
	Narmot	819	5,263	6 7	568	3,657 0	6 7 0	1,387	8,920 0	6 7	
	Magda	110	706	6 7	143	921 0	6 7 0	253	1,627 0	6 7	
	Bhur	21	118	5 10	62	349 0	5 10 0	83	467 0	5 10	
	Total	1,090	7,073	6 8	961	6,268 4	6 8 0	2,051	13,341 4	6 8	
Chiknot	Chahi	1	3	3 0	1	3 5	3 5 0	2	6 5	3 2	
	Narmot	85	294	3 7	33	125 13	3 13 0	118	419 13	3 9	
	Total	86	297	3 7	34	129 0	3 13 0	120	426 0	3 9	
Total Tahsil	Chahi	504	3,258	6 7	518	3,423 0	6 10 0	1,022	6,681 0	6 9	
	Nahri	228	967	4 4	104	416 0	4 0 0	332	1383 0	4 3	
	Abi	8	49	6 2	4	25 4	6 5 0	12	74 4	6 3	
	Dahri	134	892	6 10	119	768 0	6 7 0	253	1,660 0	6 8	
	Narmot	2,660	12,285	4 10	1,097	5,617 13	5 2 0	3 757	17,882 13	4 12	
	Magda	710	3 008	4 4	523	2,396 0	4 9 0	1 233	5 404 0	4 6	
	Bhur	2,053	4,141	2 0	547	1,368 0	2 8 0	2 600	5,507 0	2 2	
	Uncultivated				8	8 0	1 0 0	8	8 0	1 0	
	Total	6,297	24,680	3 14	2 920	14,020 1	4 13 0	9 217	38,660 1	4 3	

STATEMENT XVI —continued

1	2		3	4	5	6	7	8	9	10
Assessment Circle	Year		Total Assessment			Khalsa revenue collected during the year		Revenue suspended	Revenue remitted	Remarks
			Total	Assigned	Khalsa	On account of this year	On account of previous years			
			Rs	Rs	Rs	Rs	Rs	Rs	Rs	
Dahar Khabi.	Last Settlement		38,420	207	38,213	38,213			920	
	1883 84		30,256	947	35 309	26,772	207	8,582		
	1889 90		37,411	981	36,430	34,559		1,871		
	1896-97		37,411	945	36,466	35,961		505		
	1897 98		37,411	945	36,466	36,486	487			
	1898 99		37,411	945	36,466	36,277		124		
	1899 00		37,411	945	36,466	15,426	3	20 845		
	1900 01		37,411	945	36,466	36,466	10,230			
	1901 02		37,411	842	36,569	30,816		10,044	16,028	
	1902 03		37,411	842	36,569	35 916	2,793	296		
	1903 04		37,411	842	36,569	34,240	4,421	2,012		
	1904 05		37,411	842	36,569	36,569	7,688			
	1905 06		37,411	842	36,569	20,049		16,720	4,778	
	Total		4,86,197	11,070	4,75 127	4,17,730	22,928	61,799	21,724	
Chenot	Last Settlement	Fixed	15,604	242	15,362	15,362			2,174	
		Fluctuating	2,590		2,590	2,590				
		Total	18,194	242	17 95	17,952			2,174	
	1883 84	Fixed	13,095	199	12,896	9,449		3,402		
		Fluctuating	1,878		1,878	1,878				
		Total	14,973	199	14,774	11,327		3 402		
	1889 90	Fixed	14 151	76	14 075	13,679		396		
		Fluctuating	2 147	32	2,115	2,115				
		Total	16,298	108	16,190	15 794		396		
	1896 97	Fixed	14,151	76	14,075	11,382	812	2,683		
		Fluctuating	607	13	594	594				
		Total	14,758	89	14,669	11,988	812	2 683		
	1897-98	Fixed	14,151	76	14,075	14,075	4,269			
		Fluctuating	1,444	24	1,420	1,420				
		Total	15,595	100	15,495	15 495	4 269			
	1898-99	Fixed	14,151	76	14,075	11,265	145	2,760		
		Fluctuating	356	6	350	350				
		Total	14,507	82	14,425	11,615	145	2,759		
	1899 1900	Fixed	14,151	76	14,075	603	113	13,472		
		Fluctuating	78	2	76	1				
		Total	14,229	78	14,151	604	112	13,472		

STATEMENT XVI.—continued

1	2		3	4	5	6	7	8	9	10
Assessment Circle	Year		Total Assessment			Khalsa revenue collected during the year				
			Total	Assigned	Khalsa	On account of this year	On account of previous years	Revenue suspended	Revenue remitted	Remarks
			Rs	Rs	Rs	Rs	Rs	Rs	Rs	
Chiknot—*concld*	1900 01	Fixed	14,151	76	14,07	14,07[illegible]	3,1[illegible]			
		Fluctuating	940	15	[illegible]2	870	7[illegible]			
		Total	15,091	91	15,00[illegible]	14,945	3,210			
	1901 02	Fixed	14,151	76	14,07	2,233		7,551	18,045	
		Fluctuating	222	2	22[illegible]	220				
		Total	14,37[illegible]	78	14,29[illegible]	2 453		7 551	18,045	
	1902 03	Fixed	14,151	76	14,07[illegible]	9,978	203	4,097		
		Fluctuating	797	13	784	784				
		Total	14,948	89	14 85	10 762	203	4 097		
	1903-04	Fixed	14,151	76	14,075	11,460	105	2,615		
		Fluctuating	488	8	48[illegible]	480				
		Total	14,639	84	14,555	11,940	10[illegible]	2,615		
	1904 05	Fixed	14,151	76	14,075	14,075	2,772			
		Fluctuating	596	10	58[illegible]	586				
		Total	14,747	86	14,661	14,661	2,772			
	1905 06	Fixed	14,151	76	14,07[illegible]	2,011		12,064	8,568	
		Fluctuating	221	3	218	199				
		Total	14,372	79	14,293	2,210		12,064	8 568	
	Total	Fixed	1,84,360	1,277	1,83,083	1,29,657	11,554	49,039	28,787	
		Fluctuating	12,364	128	12 23[illegible]	12,087	75			
		Total	1,96,724	1,40[illegible]	1,95 319	1,41 744	11 629	49 039	28,787	
To al Tahsil	Last settlement	Fixed	2,38,511	2,974	2,35 537	2,35,537			23,250	
		Fluctuating	2,590		2 590	2 590				
		Total	2,41,101	2 974	2 38,127	2,38 127			2 4,250	
	1883-84	Fixed	2,06,717	6 317	2,00,400	1,44,079	1,149	56,321		
		Fluctuating	1,878		1 878	1 878				
		Total	2,08,59[illegible]	6,317	2,02,278	1,45,957	1,149	56,321		
	1889 90	Fixed	2,22 87[illegible]	5,19[illegible]	2,17 77[illegible]	2,10,537	70	7,238		
		Fluctuating	2,147	32	2,115	2,115				
		Total	2 25 117	5 227	2,19 890	2,12 652	70	7,238		
	1896 97	Fixed	2,22,963	4,411	2,18,552	2,15,071	812	3 481		
		Fluctuating	6 7	13	594	594				
		Total	2 23,570	4,424	2 19 146	2,15,665	812	3,481		
	1897 98	Fixed	2,22,963	4,401	2,18,562	2 18 562	5,070			
		Fluctuating	1,444	24	1,420	1,420				
		Total	2,24,407	4,425	2 19,982	2,19,982	5,070			

STATEMENT XVI.—concluded.

1	2	3	4	5	6	7	8	9	10
Assessment Circle	Year	Total Assessment			Khalsa Revenue collected during the year		Revenue suspended	Revenue remitted.	Remarks.
		Total	Assigned	Khalsa	On account of this year	On account of previous years			
Total Tahsil—concluded	1898-99 Fixed	2,22,919	4,401	2,18,518	2,13,902	145	4,359		
	Fluctuating	356	6	350	350				
	Total	2,23,275	4,407	2,18,868	2,14 252	145	4,359		
	1899-00 Fixed	2 22,919	4,390	2,18,529	1,17,839	257	1,00,461		
	Fluctuating	78	2	76	1				
	Total	2,22,997	4,392	2,18,605	1,17,840	257	1,00,461		
	1900-01 Fixed	2,22,919	4,390	2,18,529	2,18,529	49,431			
	Fluctuating	940	15	925	870	75			
	Total	2,23,859	4,405	2,19,454	2,19,399	49,506			
	1901-02 Fixed	2,22,919	4,381	2,18,538	1,59,145		53,192	77,774	
	Fluctuating	222	2	220	220				
	Total	2,23,141	4,383	2,18 758	1 59,365		53,192	77,774	
	1902-03 Fixed	2,22,919	4,350	2,18,569	2,00,585	13,386	17,327		
	Fluctuating	797	13	784	784				
	Total	2,23,716	4,363	2,19,353	2,01,669	13 386	17,327		
	1903-04 Fixed	2,22 919	4,350	2,18,569	1,92,941	2,779	24,717	594	
	Fluctuating	488	8	480	480				
	Total	2,23,407	4,358	2,19,049	1,93,421	2,779	24,717	594	
	1904-05 Fixed	2,22,919	4,349	2,18,570	2,18,570	36,843			
	Fluctuating	596	10	586	586				
	Total	2,23,515	4,359	2,19 156	2,19 156	36,843			
	1905-06 Fixed	2,22,919	4,349	2,18,570	1,02,192		1 16,378	20 806	
	Fluctuating	221	3	218	199				
	Total	2 23 140	4 352	2 18 788	1 02,391		1,16,378	20,806	
	Total Fixed	28,97,176	56,258	28,39,218	24,47,789	1,09,042	3,83,474	1,22,424	
	Fluctuating	12,364	128	1,,236	12 087	75			
	Total	2)9,540	56,386	28,51,454	2,459,876	1 10,017	3 83,474	1,22,424	

Lahore —"C & M Gazette, Press { Received on 28th September 1907 / Despatched on 14th November 1907

No 1092

FROM

B T GIBSON, ESQUIRE, B A, I.C S,

Settlement Officer, Gurgaon District,

To

MAJOR F POPHAM YOUNG, C I E,

Settlement Commissioner, Punjab, Lahore

Dated GURGAON, *8th October* 1907.

SIR,

I have the honour to forward the Assessment Report of the Nuh Tahsil written by Mr Boughey, Assistant Settlement Officer

2 There is a close resemblance between the Nuh and Firozpur Tahsils, and the Firozpur Assessment Report, which has already gone to the Press, should be read with this In both the proprietary body consists almost exclusively of Meos, who are pressing heavily on the soil and are extremely poor There is nothing in the Nuh Tahsil, which corresponds to the fertile valley of the Landoha, but on the other hand the population is correspondingly less dense, and the percentage of mortgages is not so large The Bangars of the two tahsils are almost identical, the only difference being that the nahri of the Nuh Bangar is markedly superior to that of Firozpur The Dahar Circle of Nuh resembles but is superior to the Chiknot Circle of Firozpur, while the Taoru and Bhuder Circles correspond remarkably closely in the lightness of their barani soil, the regularity with which the wells are used, and in the consequent security of the cropping and prosperity of the proprietary body I compare below for facility of reference the proposed rates in the circles above mentioned —

1	2	3	4	5	6	7	8
Circle	Pakka Chahi	Nahri	Abi	Dahri	Barani	Bhur	Total cultivation
	Rs a p	Rs a p	Rs a p	Rs a. p	Rs a p	Rs a p	Rs a. p
Taoru . . .	2 4 0	.	1 4 0	1 4 0	0 15 0	0 8 6	1 0 5
Bhuder . .	2 4 0	.	2 2 0	2 2 0	1 7 0	0 11 6	1 2 4
Dahar . .	1 7 0		1 7 0	1 7 0	1 3 6	0 10 0	1 3 9
Chiknot ..	1 8 0		1 12 0	1 8 0	1 2 0	0 8 0	1 2 1
Bangar .	1 8 0	1 11 0	1 3 6	1 3 6	1 3 6	0 10 0	1 5 0
Do .	1 9 0	1 9 0	.	1 9 0	1 4 0	0 10 0	1 4 8

In the two last pairs of circles the rates correspond very closely In the first pair the chahi rate is the same but the barani of the Taoru Circle lacks the fertility of the corresponding Bhuder soil

3 In view of the orders recently passed on the subject of Assessment Reports written by Assistant Settlement Officers, it is perhaps unnecessary for me to add that I am in entire agreement with Mr Boughey's proposals, which appear to me moderate and at the same time suitable and fair both to Government and the people

I have the honour to be,

SIR,

Your most obedient servant,

B T. GIBSON,

Settlement Officer.

ASSESSMENT REPORT

OF THE

NUH TAHSIL

OF THE

GURGAON DISTRICT

PART I.—PRELIMINARY.

CHAPTER I—PHYSICAL DESCRIPTION.

Area and boundaries.

1 The Nuh Tahsil is an irregularly shaped tract divided into two separate portions by a chain of hills running roughly North-West and South-East To the east of the hills is a parallelogram bounded on its remaining sides by three tahsils of the Gurgaon District, Firozpur on the south, Palwal on the east, and Gurgaon on the north On the west of the hills is a projection extending from the north half way down the total length of the tahsil, and bounded on the north and north-west by the Gurgaon and Rewari Tahsils, and after that by the Alwar State Thus the hills separate the Gurgaon District from Alwar State from the south as far as the point where the projecting table land of Taoru begins, nowhere else does the tahsil adjoin outside territory

Physical features

2. The physical characteristics of the tract may all be traced to the above-mentioned line of hills, that form part of the great Aravalli range, and extend a long way beyond the limits of this tahsil both north and south. As Mr. Channing points out there are traces of another similar line slightly more to the east, which, though only visible at one or two places within the tahsil, is nevertheless important because it appears just north of the Nuh Tahsil, and forms the eastern side of the Bundsi valley, which is the source of a great deal of the drainage of the tahsil. The hills themselves are about 250 or 350 feet high, and are absolutely devoid of vegetation As a grazing ground for goats and cattle they help to supply a much felt want, but their utility in this respect is more than counterbalanced by their forming a haunt for herds of chinkara and wild pig which do immense damage to the neighbouring crops Their effect on soils and drainage will be dealt with under those heads, and I shall only here notice that they have a distinct climatic influence. The villages at their feet suffer severely from heat especially those on the eastern side, while during the rains the tract is devastated by fever.

Streams

3. The only streams which have any effect on the tahsil now are the Maindwara and the Birond. These are the two channels by which flood water enters the tahsil They are merely torrents which flow after heavy rain, and carry off the drainage of the hills Both have their rise in the Bundsi valley, and entering the tahsil from the north unite near the village of Kahaka in front of the Khalilpur Bund. The rest of the flooding is due to insignificant torrents to which no name has been given. The Indori Nadi passes through the Taoru Circle on its way to join the Sahibi in the Rewari Tahsil It has no importance as an irrigation stream, though a certain amount of precarious cultivation is done in the dry bed of the stream Formerly there was some dahri land in one or two villages in the Taoru Circle, but a bund constructed in Alwar, where the Indori rises, has put a stop to this. A similar complaint is made—I do not know with what truth—as regards the Landoha This stream reaches the Nuh Tahsil after passing through Firozpur, and its only effect here is in connection with the

the tahsil itself, the object of which is to hold up the waters and prevent them—wholly or in part—from entering the tahsil as they used to do. With these I am not concerned in this report, and I therefore proceed to discuss the means taken to deal with the diminished water supply that is now permitted to enter the tahsil. The Khalilpur Jhil was protected by a single bund bearing that name. This extends in a curve along the west side of the old jhil and diverts all the water that used to flow into the jhil, until it is absolutely held up by the Qutabgarh Bund. A sluice permits of water being let into the basin if required, and this is perhaps capable of some development. No real flooding is done on the inside of the bund, as the waters are merely guided past the dangerous part, and allowed to continue their course round the end of the bund. The map of the bunds will serve to illustrate the position. This is sufficient for the Khalilpur Jhil, but the floods thus diverted would if left to themselves go to swell the Chandeni Jhil. To prevent this a bund was built at Qutabgarh, which directly faces the course of the floods. Water is only let through in sufficient quantities for actual irrigation in the villages of Qutabgarh and Mailawas. A sluice was made higher up with the object of letting water into Ghasera, the lands of which have been almost entirely deprived of flood water by these means, but there is hardly ever enough water to reach as far along the bund as this. Between the Khalilpur and Qutabgarh Bunds the floods irrigate a large area of country At the village of Chappera, which under the new system was liable to get too much water, a cut takes off, which passes by Aldonki and leads to the small Doraiichi Bund. In order to still further protect Chappera a mud rampart has been erected round the abadi. As a matter of fact these subsidiary works are rarely required. Only once since the construction of the bunds has Chappera been in danger of flooding, and even then the amount of water that was carried down to the Doraiichi Bund was apparently very small.

Turning to the Chandeni Jhil the most important works affecting this part of the drainage are situated outside the tahsil. The Sohna Bund holds up all the water that used to come down from there, though a large sluice is occasionally opened, which admits of a certain amount of flooding This, however, is usually done in the interests of the Sohna people and more often than not damages the crops of the Nuh villages. The water may reach as far as Kherli Kankar, but never beyond that point, so it can hardly be said to affect the Chandeni Jhil now. The latter besides being protected from the Sohna floods is saved by the Qutabgarh Bund from any danger of overflow from the east The only waters that enter it now come from the hills in the immediate vicinity In the middle of the old jhil is a bund running east and west. This saves the Chandeni lands from excess flooding, as otherwise the surplus water from the northern half of the old jhil would flow down into the southern half. As it is, a small portion is liable to submersion though not to any serious extent. All this area has benefited most enormously by the drainage system. The land is the best in the tahsil, and the crops of wheat and goohni grown there in a fair year are wonderful. The present water supply is amply sufficient, and almost all danger of submersion has been avoided.

The last of the three jhils was the largest and most important of all. As previously pointed out the Kotila Bund has for a very long time cut off the floods from the Firozpur Tahsil, and after the Chandeni Cut was extended so as to form an embankment that joined the Kotila Bund, the only way for those floods to enter the jhil was by passing over the bund. This used to occur fairly frequently, and Mr. Channing in his report noted the fact and proposed that the Canal Department should charge abiana whenever it occurred. However for the last ten years no water has been carried along the Kotila Bund channel, and for very much longer than that no floods have passed over the bund. Besides this dam there is no other drainage work of any importance that was built with the avowed object of draining this jhil, but there can be no doubt that the draining of the other two jhils has had the result of diminishing the water supply of the Kotila Jhil also. Surplus water from the Chandeni Jhil used to pass on towards Kotila, but a good deal was utilised on the way, and the small irrigation Cuts made for this purpose can still be seen between Nuh and the Chak Jhil lands Apart from this, however, the area enclosed by the Kotila Bund and Chandeni Cut is very large, and as the slope is all towards the jhil a good deal of water used to accumulate there in the days when the Dahar Circle was almost entirely inundated.

But, as in the case of the Chandeni Jhil, the only water supply now for the jhil is from the hills in the immediate neighbourhood, and indeed these two jhils are now very similarly situated. The only difference is that the soil of the Kotila Jhil is harder and more black, while the slope from the hills is more pronounced, so that the floods enter the jhil area with more violence than is the case in Chandeni Finally the Chandeni floods are spread over a larger area, the various channels by which the water comes down from the hills being somewhat further apart Thus in every way the Chak Jhil tract is the more insecure owing to the hardness of its soil it requires more flooding, and yet its standing crops are more liable to be damaged when there is a late fall of rain

Three small bunds have been built within the Chak Jhil area, of which only the Akhaira Bund is of any importance The detailed statement attached to paragraph 44 shows that on the whole it has been fairly profitable It holds up a little water which flows down the slope from east to west All the irrigation is on the upper or eastern side, and no sluice was considered necessary The Palla and Palri Bunds serve no useful purpose and might be handed over to the zamindars to keep up if they wish

This completes the account of the drainage of the Dahar Circle. In Taoru several dams have been built, but the problem was very different. The circle is almost surrounded by hills, but the level being very much higher than that of the Dahar Circle the volume of water to be dealt with was much less, and there was no drainage question, the object being to utilise the water of the various torrents, which owing to the sandy character of the tract ate into the ground and did great damage by carving out deep nullahs Eventually the floods spread over a certain amount of country, but being uncontrolled did more harm than good The first two bunds I will describe are known as the Taoru-Bahora road and Taoru Bunds respectively Their object was to hold up the floods which previously spoilt some very good land north of Taoru The Taoru-Bahora road runs north and south, while the Taoru Bund takes off from it at a point about half mile north of Taoru and runs in a westerly direction By these means the floods from the east and south have been held up and two blocks of land have been most successfully irrigated The land to the east of the Taoru-Bahora Bund usually grows a good flooded crop The old channel bed has silted up and is now almost level with the surrounding fields to a distance of about 300 yards from the road At a point about $1\frac{1}{4}$ miles north of Taoru a sluice has been built to let off the surplus water which thus passes under the road and floods land on the west At present this sluice is very badly placed and the only result of its use is to spoil some good well land The district authorities have been addressed on this point, and I believe the question of altering its position is under consideration The Taoru Bund has no sluice, but all the irrigation to the south is good and the abi land is most valuable The Dhulawat Bund holds up water from the hills close to the village from which it takes its name More water is held up than is required and the people are very anxious to have a sluice built in order to allow surplus water to be let off This would not give any further irrigation as the land on the far side of the bund is unculturable, but the water could be let off into the old nullah bed and might be utilised lower down. At present the land under the bund is very liable to submersion and many good crops have been spoilt in this way The Raheri bund irrigates about 50 acres, though in a good year over 100 acres have paid abiana Here again there is no sluice, all the water being required for flooding inside the bund, and as a rule the results are most successful. These two bunds are situated close together east of Taoru, but the Raheri Bund gets much less water and there is no danger of submersion Further north lies the Sabras Bund This again deals with local drainage from the neighbouring hills, but it is not quite so successful as the others, as a good deal of damage is done The people are anxious to have a few alterations made and I think the district authorities would be wise to get an expert to listen to what they have to say, and decide whether the proposed alterations are likely to make a real improvement

Assessment circles

5 Mr Channing divided the tahsil into three assessment circles, which have been retained unaltered To the west lies the Taoru Circle, a high table land almost surrounded by hills and completely cut off from the rest of the tahsil, which it does not resemble in any way. The soil is sandy, and the

is the kharif when almost the whole circle is sown with the autumn ... and a little inferior cotton. In the spring they have to rely ... water being plentiful and sweet there is a regular system of ... the east of the hills is the lowlying Dahar Circle, which re... of all the neighbourhood. Its chief characteristic is the ... derives its name. The soil just under the hills is light, ... t is very heavy clay, which contains a lot of kallar and ... a thorough soaking with rain water before it can produce ... being salt are merely used as a protection against total ... he action of the water is most injurious to the soil. Fur... r upland forming part of the large loam plain extending ... sil of the Delhi District to the Kosi Tahsil of the Muttra ... Palwal Tahsil, to which it bears a strong resemblance. ... ted by the Agra Canal, but the remainder is very ... is rather hot and dry hardly varying at all ... the wells being salt are little used, the great ... gram in the spring harvest. When there is a ... ns at fairly frequent intervals a wonderful ... btained.

Area and boundaries
Physical features
Streams
Drainage and
Assessment
Soils
Flooded lands
Rainfall

6 Area
7 Soils
8 Irrigation
9 Communications
10 Live-stock
11 Population
12 Tenures and holdings
13 Transfers
14 Miscellaneous income
15
16
17

CHA...

6 The classes of soil recorded last settlement were—

18 Jinswar returns
19 Matured area
20 Percentage of principal
21 The system of cultiva...
22

... ainage from hills or higher lying land.

... soil.

Bh... ... y soil.

Within the classes of chahi and dahri there was a further classification by soils, so that we have chiknot dahri, narmot chahi, etc. There was also a class *kabil abpashi*, in which was put land which was within the area served by a well, but was not irrigated in the year of measurement, and also land irrigable by wells not in use in the year of measurement.

The classification of soils now adopted is the same as the above, except that in irrigated lands no soil distinctions have been retained, while the definition of chahi has been altered. Two additional classes have been introduced, *viz*, nahri for canal irrigated lands, and abi for land irrigated from artificial embankments.

The following definitions appear in Mr. Hamilton's Preliminary Report on Soils, Assessment Circles, and Prices, and have been sanctioned for the present settlement.—

Chahi —All land regularly irrigated from a well whether the well is constructed of masonry or not, and whether it is worked by bullocks or by lift (dhenkli). Land will be regarded as regularly irrigated if it has received water in two different years in the period 1898-99 to 1902-03, provided the means of irrigation are still in existence.

Nahri.—All land regularly irrigated from the Agra Canal. Land will be regarded as regularly irrigated if it has received canal water in any two years from 1898-99 to 1902-03, or is irrigated at the time of measurement

Chahi-nahri —All land which is regularly irrigated both from the canal and from a well, whether the canal and well are used in the same harvest or not. All land which has been irrigated from the canal in two years out of the five years 1898-99 to 1902-03 and has also been irrigated from a well in the same five years will be regarded as chahi-nahri

Abi.—All land which is irrigated from tanks, jhils, springs, or from river branches, or by District Board bunds Both the land flooded by water held up within the bund, and also the lands irrigated by cuts from the bund will be included.

The definitions of the unirrigated soils have not been changed. The definition of chahi has been altered, and this accounts to some extent for the difference in the area recorded now. The nahri classification is quite new, but neither this nor the chahi-nahri definition require comment.

Flooded lands.

7 The question of flooded lands forms one of the chief problems of the Nuh Tahsil. Mr. Channing experienced a similar difficulty, and he notes that he made a point of looking into this question himself in every village In spite of this Mr Wilson three years later was of opinion that the flooded area had been over-estimated, and there seems no doubt that this was true. Mr Channing, from the statistics which he accepted, had an erroneous idea of the rainfall of the tract, and appears to have based his estimate of the floods on the results of exceptionally good years But in any case the flooded area would now be much smaller than it was then In the paragraph on drainage I have shown that since last settlement a great deal of the water supply has been cut off outside the tahsil on the other hand the protection of the three swamps where water used to collect has placed a larger supply at our disposal for irrigation purposes There is practically no difference between the figures for dahri at last settlement and those for dahri and abi now in the Dehar Circle, but these figures are not final, and it is probable that the difference will be greater when all the estates have been inspected My own experience has been that the flooded area has again been often over-estimated In places there was a tendency to accept all the settlement entries as correct, land which was shown as dahri in our papers was retained as flooded land in spite of altered conditions For instance, both the Kotila Bund channel and the Chandeni Cut used to convey water over a large portion of the Ujina flats Owing to the various bunds this has been entirely altered, the Chandeni Cut has not carried water for many years and the same is true of the Kotila Bund channel Moreover, as I have elsewhere stated, it is likely that this area was liberally estimated on purpose because the land paid a barani assessment and water rates In spite of this the settlement entries had been accepted as they stood, and there is reason to suppose that the same kind of thing will be found elsewhere. However the entries are being constantly re-checked in the light of recent experience and by the time that all estates have been inspected, the question will have been gone into most thoroughly The difficulties have of course been greatly increased by the abnormally dry seasons which have been experienced of late years, as until 1906 there had been no opportunity of testing the correctness of the entries Fortunately the monsoon in that year was average, and the patwaris were ordered to mark on their maps the area affected by flooding at the time when such flooding occurred In order to further test the accuracy of these maps I had a rough crop register prepared for the Dahar Circle showing the crops grown on land alleged to have been benefited by flooding The result shows that 71 per cent of the area was under wheat or gochni, 14 per cent under bejhar, the rest being miscellaneous crops Bejhar is practically never grown on land that has received a real soaking, and it may safely be assumed that none of the 14 per cent under bejhar received any advantage from flooding Of the miscellaneous crops not more than 8 per cent are flooded crops, the remainder being sarson and tara which are not grown on any but barani lands This shows that about 80 per cent of the land said to have been flooded in 1906 was really advantaged As it is proposed to put a fixed assessment on abi and dahri lands it is essential only to include in the definition such lands as possess a real advantage I doubt if this has been done at present, and in dealing with the assessment of the Dahar Circle I shall again refer to this important question.

The classification of unirrigated soils made at last settlement has been very little altered, except where the disturbing elements noted above have come into play In the Taoru Circle most of the soil has been recorded as magda and only the very sandy blocks are entered as bhur, but the difference is not great The generally uniform character of the soil in the various circles has simplified this part of the work, and very few alterations have been found necessary

Rainfall.

8 Statement I gives details of the rainfall for 20 years from 1885-86 to 1905-06 There are three rain-gauges in the tahsil, and the average of all three has been taken The year is divided into two periods, *viz*, the four months of monsoon rain and the rest of the year The previous figures are compared with those now obtained in the following statement —

(The figures of the adjoining tahsil of Alwar State are added for reference).

Average rainfall as given in Section 7, Gurgaon Settlement Report	32·0
Average rainfall as given in Section 7, Nuh Report	28 2
Average rainfall of 18 years in the Revision Report, Section 2	24·0
Average rainfall Tijara Tahsil Alwar (1876—1898)	22 07
Statement I { Rain Registers	23 03
Statement I { Gazette Average	23 33

In Section 2 of the Revision Report Mr Wilson points out that the figures given by Mr Channing do not represent a true average being the result of a few exceptionally wet years. In a district where the variations are so great any attempt to deduce an average from a few years is extremely dangerous The present statement shows a maximum of 43 06 inches in 1885-86 and a minimum of 11 88 inches in 1905-06 It will be noticed that the present average is slightly below Mr Wilson's, but the gazette returns on which he based his calculations were admittedly in excess of a true average The difference is in any case slight, and seems to dispose of the theory prevalent among the people that the rainfall has been diminishing But there can be no doubt that in the Dahar Circle 23 inches of rain do not mean so much as they did before the floods were held up or diverted by bunds When Mr. Channing wrote his report a normal monsoon rainfall meant that a very large area was thoroughly soaked, and even allowing for loss by submersion the harvests were generally good The result of interfering with these natural floods as far as this circle is concerned has been to make the distribution of rainfall far more important than it was before. Most of the soil is heavy (some of it being extremely stiff clay), and as it does not get soaked to the same extent now, frequent rain is absolutely necessary

The area under crops is larger in the autumn than in the spring harvest but the latter entirely consists of valuable crops capable of yielding a high outturn. For the former about 17 inches of rain are required during the four months; less than 14 inches may be said to result in total failure, while the average rainfall of 23 inches should be sufficient to ensure a fairly good crop The statement shows how abnormal the last few years have been In the 20 years there have been 9 falls of less than 17 inches, 5 of which have occurred in the last eight years. For the spring crop no similar estimate of the amount of rainfall required can be made, as proper distribution means much more than actual amount. Rain is required at least every 6 weeks and a very heavy fall late in the season is certain to damage the gram and submerge a large area of lowlying crops

The sandy circle of Taoru can do with considerably less rain than is required in the rest of the tahsil. Its principal harvest is the kharif, and as the monsoon rarely fails altogether there is usually some sort of a crop. Moreover the circle is particularly hardy and the variation in rainfall has a very much slighter effect

CHAPTER II.—GENERAL STATISTICS

9. The following table compares the areas of the past and present Settlements Before Mr. Channing's Settlement the villages now included in the Nuh Tahsil were distributed over various parganas which were merged into the tahsils of Gurgaon, Palwal, and Nuh, making any comparison of area impossible :—

Area.

1	2	3	4	5
	Total area in acres	Percentage of total area of		
		Uncultivable	Unculti vated	Cultivated
Last Settlement	[illegible]	13	6	81
Now	[illegible]	12	6	82

Cultivation had practically reached its limit at last settlement, and there is very little difference between the two sets of figures. No further extension is possible without encroaching on the grazing area, which is already too small. Fortunately a good deal of the unculturable area consists of hills where some grazing is obtained, but the remainder is salt land which hardly produces anything beyond a few karil bushes. The present area is distributed by circles as follows :—

1	2	3	4	5
Heading	Taoru	Dahar	Bangar	Total
Unculturable	22	14	5	12
Culturable ...	3	7	6	6
Cultivated ...	75	79	89	82

The above figures do not require much explanation The large unculturable area in the Taoru Circle is all hill land, and this explains why the culturable area is so small, there being less necessity to set aside land for grazing Similarly the difference between the Dahar and Bangar Circles is almost entirely due to the hill area possessed by the former, though possibly there is also slightly more salt land The culturable area in each circle is terribly small

10. The areas of each class on soil at last settlement and now are compared in the following statement —

Soil.

1	2	3	4	5	6	7	8	9
Soil	Taoru		Dahar		Bangar		Total Tahsil.	
	Settlement	Now	Settlement.	Now	Settlement.	Now	Settlement	Now
Chahi	9 34	13·08	3 38	3 63	5 04	5 61	5 23	6 30
Nahri .		2 65	.	8·08	...	26 71		11·06
Abi ...						1 10		4 13
Dahri .	2 18	1 45	37 68	29 23	07	08	15 17	11 71
Chiknot ...			1 43	2 23	2 54	1 50	1 61	1 49
Narmot	1 99	1 89	36 62	36 06	72 39	46 68	44 71	33 76
Magda .	64 91	61 63	10 05	10·41	11 36	10 37	21 28	20 43
Bhur .	21 58	19 30	10·84	10 36	8 60	7 91	12 00	11 10

The large increase in the chahi area is due in great measure to the different classification now adopted

The new nahri classification needs no comment but it explains the alteration in the narmot area in the Bangar Circle The classification of land as abi is also new. Taken in conjunction with the dahri the figures are very interesting In the Taoru Circle where the bunds have been most useful the total flooded area shows a decided advance on the settlement figures In the Dahar Circle the total is exactly the same, but this result has largely been obtained by blindly following the settlement classification in spite of altered conditions, and I have elsewhere stated my reasons for thinking that the total flooded area now is smaller than it used to be. The unirrigated soils were most carefully classified at last settlement, and practically no alterations have been made As the final attestation of many villages remains to be done the above distribution is liable to alterations.

The increase of cultivation by circles is as follows :—

Taoru	1 4
Dahar	6
Bangar	6
Total Tahsil ...	75

Irrigation
(a) Wells

11. In this tahsil well irrigation is for the most part protective only. The chief crops are the valuable spring crops grown on unirrigated land and the wells are used as little as possible. There are several reasons for this First and foremost is the saltness of the water. Even if there is rain at sowing time the heavy clay and loam soils are injuriously affected by the use of salt water. There is moreover a great tendency to saltness in the soil, and this is intensified by irrigation with salt or brackish water. As this will be dealt with more fully in the chapter on the system of cultivation, it is sufficient here to note that though the wells are practically not used at all in the autumn, and as little as possible in the spring, the protection afforded by them is most valuable, as in dry years the unirrigated crop is a total failure The above remarks do not apply to the Taoru Circle where the wells are in regular use for the same reasons as in the Rewari Tahsil.

The data relating to the wells of each circle are given in Statement III. Kachcha wells are only popular in the Taoru Circle, and it is curious to notice that this popularity is of very recent growth The reason appears to be that there are now enough masonry wells to ensure a fair amount of stable irrigation, and it has been found profitable to dig rough kachcha wells, which here cost only about Rs 10, and often not as much as that, and last from 2 to 10 years In the other circles the saltness of the water and the system of irrigation referred to above, render kachcha wells useless. The cost of a masonry well varies with the size and length of the cylinder. The result of my inquiries has been to show that an average well costs Rs 20 per hath (*i e*, 1½ feet) to construct This assumes that the work is done by the zamindar himself with the help of a mason and not given out on contract. In the latter case the cost is much more. On the above assumption the cost works out as follows .—

	Rs.
Taoru Bangar	750
Dahar	450

A good masonry well lasts for 200 or 300 years, but there is a tendency to leave repairs rather too long, and I should put the life of a well at not more than 150 or 200 years.

Another class of well is found sometimes in the Dahar and Bangar Circles known locally as Kurand These are roughly made with stones put together without the help of mortar above the water level. They are not very successful as they cost about half as much as a proper masonry well and do not last nearly so long Lastly there is the dhenkli, consisting of a shallow hole in the ground from which water is lifted by a wooden lever. A few are in regular use by malis for growing vegetables and other valuable garden produce, but as a rule they are used in dry years only Water must be very close to the surface to make the dhenkli profitable, and the three places where they are to be seen working in great numbers in a dry year are the Kotila and Chandeni Jhils, and the lowlying flats near Ujina The dhenkli is always dug by the user himself, and the only cost is about Re 1 or Rs. 2 for the wood lever, which will last for a fairly long time.

The average area irrigable per lao in each circle is shown in columns 36 and 37 of Statement III. It is largest in the Taoru Circle where irrigation is regular, though 4 acres is a very low average. The reason, I think, is that near the hills the wells are deep and hard to work, and consequently irrigation is small In the fertile villages in the middle of the circle the irrigation is distinctly higher, and I was not prepared for such a low figure In the Dahar and Bangar Circles the small average irrigation is due to the peculiar circumstances which have been already noticed The figures are however somewhat misleading, as there are many two lao wells on which both laos are never worked together, because the result would be to work down to the salt source and ruin the well. Such wells have to be shown as two lao wells, but naturally the irrigation, which would be small for a single lao, is ridiculously

inadequate for two. Moreover even when this is not the case it is very common to find that a well is not being used to the full capacity of the working laos because it is not spring-fed, and if overworked is liable to run dry. This to a certain extent vitiates the resulting averages, but on the other hand it shows how limited the action of the wells necessarily is in those circles. As regards the character of the water it may be said that generally water in the Taoru Circle is sweet, and in the other circles either salt or brackish. This is true of Taoru almost without exception as the statement shows In the other two circles the proportion of salt and brackish wells would be very much higher, but for the fact that there are a number of wells the surface water of which is sweet but the source being salt, the character of the water changes after it has been worked for a short time. Most of these wells have been recorded as sweet As a matter of fact, except just under the hills, I do not think any sweet wells exist in the Dahar Circle, and I doubt if there are any in the Bangar Circle either For the cost of wood-work and the method of working the wells I would refer to paragraph 8 of the Rewari Report The various prices given to me in answer to my inquiries were somewhat higher than those detailed for Rewari, but the recent famine has had a very serious effect on the Nuh Tahsil and prices are admittedly inflated.

The increase or decrease per cent of wells capable of use, laos and irrigation in each circle is as follows —

1	2	3	4	5	6	7	8
Circle	Wells in use		Laos		Irrigation		
	Pakka	Kachcha	Pakka	Kachcha	Pakka	Kachcha	Total.
Taoru	+33	+242	+25	+160	+10	+75	+19
Dahar ...	+164	+500	+26	.	+99	+71	+97
Bangar ..	+102	+500	+30	—70	+56	+583	+58
Total Tahsil .	+78	+252	+27	+96	+38	+87	+42

This shows a most satisfactory development in irrigation throughout the tahsil. The largest increase in masonry wells has been in the Bangar Circle Considering that this circle alone has benefited by canal irrigation the development appears abnormal, but the area that is not served by the canal is very badly off There is no flooding as in the Dahar Circle, and in a dry year there would be total failure except for the wells , moreover, as previously stated, the wells when sunk cannot be fully used It is instructive to compare the protective power exercised by a well in the various circles In the Dahar Circle it is terribly small The chahi area per well is only 5 acres and the irrigation 2 acres This includes a certain number of wells under the hills, where the water is good and the soil light, and where consequently irrigation is properly kept up. In the Bangar Circle a well protects between 9 and 10 acres and irrigates 4, while in the Taoru Circle between 8 and 9 acres are protected and over 5 acres irrigated The figures in columns 3 and 18 show that the proportion of single lao wells is greatest in Taoru, so this difference is not due to any superiority in the size of the Taoru wells, but is a real illustration of the comparative effectiveness of irrigation in the various circles. The extraordinary figures for non-masonry wells in the Dahar and Bangar Circles may be neglected, the total number being 12 in each circle as against 2 at last settlement The present irrigated area is the average of the 8 years from 1898-99 to 1905-06 and may be taken as accurately representing the average in the various circles The settlement figures only give the area irrigated in the year of measurement In a tahsil where the well irrigation varies so enormously with the rainfall the results of a single year are most unlikely to prove of any value, and this is shown by comparing the result of

adding the two years of revision, and getting an average for three years as follows :—

1	2	3
Circle	Settlement	Average of 3 years.
Taoru ...	2,480	2,717
Dahar ...	577	896
Bangar ...	1,406	1,542

This shows that the increase in irrigation is not so large as the figures seem to indicate, in fact as there happened to be really good rain in the year of measurement the figures are useless (as regards the Dahar and Bangar Circles) except to show how little the wells are required in a good year The information required by Settlement Commissioner's Circular No. 21 is given in the following statement :—

1	2	3	4
Assessment circle	Number of masonry wells in use in the beginning of the expiring settlement which have fallen out of use during its term	Number of new masonry wells sunk during the term of the expiring settlement and still in use	Number of masonry wells which were not in use at the beginning of the expiring settlement but were repaired during its term and are still in use
Taoru ...	10	74	33
Dahar ...	55	110	55
Bangar	24	107	61
Total Tahsil ...	89	291	149

(b) Canal irrigation.

The system of irrigation in vogue on the Agra Canal has been described in the Palwal Report There are no important differences in the Nuh Tahsil The cultivators are mostly Jats, the proportion of Meos being too small to affect the main results. The average area irrigated yearly for the selected years is 17,452 acres, or 75 per cent of the nahri area, which corresponds almost exactly with the Palwal figures At last settlement irrigation from the Agra Canal was only just beginning, and Mr Channing did not levy any nahri assessment, nor did he give details by tahsils of the area irrigated He notes however that in the year of measurement 23 Nuh villages took canal water in the autumn and 22 in the spring, the irrigation for the whole district being 41,275 acres in that year. Mr Wilson in his Revision Report gives more detailed figures, the entries for the Nuh Tahsil being as follows :—

1	2	3
Number of villages in which irrigation takes place	AREA IRRIGATED IN ACRES	
	1881-82	1882-83
25	9,974	12,145

The actual increase in irrigation is shown in the following table of the areas irrigated in each harvest since the introduction of irrigation in 1875 —

1 Year.	2 *Kharif*	3 *Rabi*	4 Total
1883 84	5,641	12,398	18,039
1884-85	7,181	5,896	13,077
1885-86	6,108	10,910	17,018
1886-87	2,192	7,354	9,546
1887-88	5,827	7,754	13,581
1888-89	4,717	9,728	14,445
1889-90	7,049	11,564	18,613
1890-91	4,735	10,468	15,203
1891-92	7,004	12,031	19,035
1892-93	4,934	5,705	10,639
1893 94	4,772	6,883	14,355
1894-95	7,778	4,955	12,733
1895-96	6,360	9,289	15,649
Average of 10 years	5,607	8,573	14,380
1896-97	9,141	15,259	24,400
1897-98	8,809	8,757	17,566
1898-99	7,242	10,320	17,562
1899 1900	8,780	11,214	19,994
1900-01	10,541	4,337	14,878
1901-02	7,739	11,511	19,250
1902-03	8,150	9,789	17,939
1903-04	8,333	9,327	17,660
1904-05	9,177	630	9,807
1905 06	6,003	11,695	17,698
Average of 10 years	8,391	9,284	17,675

The great variation in the figures is due to the fact that the amount of canal water taken varies with the rainfall, in a good year very little water is wanted, whereas in a dry season the cultivators will take all that they can get. Unfortunately this tahsil lies at the extreme edge of the area served by the canal and there is usually not enough water for their needs in a dry season The ten years' averages indicate a steady increase in the irrigated area, and though to a certain extent the recent dry years are responsible for this, yet new distributaries have been opened, and the canal is generally popular.

The following statement has been made up from figures supplied by the Canal Department It shows the area irrigated with the amount collected during the five years selected for the Produce Estimate

1 Year	2 Average area irrigated in acres: Flow	3 Lift	4 Total.	5 Occupier's rates	6 Owner's rates
1898 99	15,327	2,069	17,396	51 804	14,477
1900 01	12,089	2,366	14,455	41,445	13,342
1901 02	16,116	3,253	19,369	58,639	18,865
1902 03	14,359	2,800	17,159	50,991	16,351
1903 04	14,819	3,254	18,073	53,655	17,182
Total of the 5 years	72,710	13,742	86,452	2,56,034	80,217
Average of the 5 years	14,542	2,748	17,290	51,207	16,043

For purposes of reference I also append the table of the rates of canal dues now in force on the Agra Canal. The old and new rates are compared in

para. 8 (*b*) of the Palwal Report, where the whole question has been fully discussed.

1	2	3	4	5
Crops.	Original	Revised	Proposed by Punjab Government	
			Per acre	Per bigha
	Rs a p	Rs a. p	Rs a p	Rs a p.
Cane	8 14 3	8 14 3	8 12 10	5 8 0
Wheat, barley, and mixtures ..	4 0 0	5 5 4	5 3 3	3 4 0
Gram and peas	4 0 0	2 10 8	2 12 10	1 12 0
Cotton	4 0 0	2 10 8	2 12 10	1 12 0

Communications

12. The main road from Gurgaon to Firozpur passes through this tahsil. From Gurgaon to Nuh it is already metalled, and the conversion of the remaining portion is now being undertaken as well as of the road from Nuh to Palwal The latter is the more important of the two as far as this tahsil alone is concerned, as it links it up with the Agra-Delhi-Chord Railway, besides facilitating communication with the important market town of Palwal, which already receives most of the surplus cotton of the tahsil The eastern portion of the tahsil has fairly easy communication with the town of Hodal, in the Palwal Tahsil, which is also on the Agra-Delhi-Chord Railway, and besides being a market town itself, lies close to the town of Kosi in the Muttra District. Thus the canal area is fairly accessible, and as the available surplus is largest there this is satisfactory The Grand Trunk Road passes quite close to the eastern boundary of the tahsil, and is of great assistance in conveying produce to Hodal Both Palwa land Hodal contain ginning mills, and there is consequently a ready demand of cotton. Within the tahsil itself the only market towns are Nuh, Hathin and Taoru. The latter is connected by a poor sandy road with the town of Rewari, but I cannot find that there is any trade along it, as the people seem to deal entirely with their local bannias, and the latter find a ready market for their stock within the tahsil itself.

Live stock.

13. The figures for live-stock are given in Statement IV. Comparing columns 2 and 6 there has been a decrease in every circle, and a deduction must be made from the present figures on account of bulls. The position is worst in the Dahar Circle, while in the Bangar Circle the numbers have remained almost stationary, and there has actually been a slight increase in the number of ploughs But the introduction of canal irrigation has had a great effect upon the prosperity of the people, and the position is not as good as might have been expected. The present condition of the tahsil is undoubtedly bad, but I doubt whether it is comparatively so bad as the figures indicate. The Taoru settlement figures for instance seem to be obviously too high Even with their present numbers the people have morethan is actually necessary for cultivation and can afford to sell at neighbouring fairs. But more extraordinary still is the decrease of ploughs in Taoru. This would seem to indicate an amount of distress which is very far from being the case, and I can find no satisfactory explanation of it. I therefore prefer to take the present figures by themselves without paying much regard to any increase or decrease they may indicate, as I do not think that much reliance can be placed upon this In the Taoru Circle then we have an average of slightly under 16 acres of cultivation to a pair of bullocks, after making allowance for bulls On this light soil this is a very small duty per plough, and, as might be expected, the people not only can afford to sell at neighbouring fairs but also lend to their poorer relatives in the Dahar Circle In the latter place the shortage of plough cattle is terrible Making allowance for bulls the average works out to 23½ acres to a pair of bullocks. On that heavy clay soil 12 acres would be by no means a low average, and the present figures are practically

twice as much. Moreover, the position now is if anything worse, as numbers of cattle died in 1905-06 The results are everywhere apparent Land does not get nearly as much ploughing as it requires with the result that outturns suffer. Again, if a tendency to saltness appears, a little care and frequent ploughing may do wonders, but nowadays such land is often given the same scanty attention with the result that one or two dry seasons are sufficient to cause very serious injury The average for the Bangar Circle is the same as that for Taoru, 16 acres. This is about right for the class of soil, though in the canal tract a pair of bullocks probably do not work quite so much, as the land is very carefully prepared and the people can afford to keep as many as they require The plough averages do not show any very great difference, 17, 24 and 16 acres being the averages for the three circles.

Turning to other animals, the number of cows is in all circles almost the same as that of bullocks. The proportion is lowest in the Bangar Circle where, however, many more cow-buffaloes are kept The numbers of young stock are fair, though, as I remarked before, the present totals would probably be considerably lower. Taking the figures as they stand we may say that the numbers are quite sufficient having regard to the smallness of the grazing area Sheep and goats are not usually kept by agricultural tribes A certain amount of transport work is done by donkeys, but bullock-carts are generally used for this purpose, the number of camels being small.

Population.

14 The following table shows the totals of the general population at different periods :—

1 Year	2 Population	3 Incidence per square mile
1848	95,999	
1868	1,41,407	
1881	1,20,324	299
1883	1,15,870	288
1891	1,31 593	327
1901	1,45,931	362

Details by circles of the last three enumerations are given in Statement IV The causes of the decrease in population between 1868 and 1883 are dealt with by Mr Wilson in section 6 of his Revision Report In the next 8 years an increase of 13 per cent is recorded, and the last census showed a further increase of 10 per cent The present total is very little in excess of that recorded in 1868, but to appreciate the position correctly the details by circles must be examined From them we see that the population in the Dahar Circle is still less than it was in 1881 This is the more astonishing as the drainage of the flooded lands has undoubtedly done much to improve the healthiness of the tract Neither the soil nor the people appear able to make any headway against adverse conditions, and one or two bad years have an effect which only wears off very slowly Most of the increase in population is in the Bangar Circle, though the Taoru figures are satisfactory

The following places have been classed as towns —

Taoru	Ujina
Nuh	Ghasera.
Malab	Hathin

Excluding their population and cultivated areas the incidence of the rural population per square mile of cultivation is—

Taoru	465
Dahar	309
Bangar	417
Total	421

15. The usual form of tenure is imperfect *bhaiachara*, as the following statement shows :—

1	2	3	4	5	6
Circle.	Zamindari		*Pattidari.*	*Bhaiyachara*	Total
	Landlords	Communal.			
Taoru	..	1	28	55	84
Dahar	1	4	29	72	106
Bangar	...	3	24	72	99
Total Tahsil	1	8	81	199	289

Statement XI shows that 58 per cent of the cultivated area is in the hands of the owners, and the average area per owner and the size of proprietary and *khudkasht* holdings is given below—

1	2	3	4
Circle.	Average of proprietary holdings	Average area per owner	Average area of *khudkasht* holdings
Taoru	10 1	8	3 4
Dahar	5 4	7	2 2
Bangar	8 0	7	3 0
Total Tahsil ...	7 0	8	2 7

There are very few large owners One or two villages were auctioned for failure to pay land revenue, and elsewhere large properties have come into the hands of mortgagees, but as a rule the land is owned by small peasant farmers Their position is infinitely worse now than it was at last settlement. Then cultivation had recently increased and there was very little debt. The figures in the above table are for all cultivation, but if we exclude the area in the hands of mortgagees and of tenants who cultivate at revenue rates we find that the average area free for profit per owner is as follows .—

Taoru	5 5
Dahar	4·3
Bangar	4·7
Total Tahsil ...	4 7

Thus in spite of the fact that population has not greatly increased, and in the Dahar Circle indeed has remained almost stationary, the farmer is distinctly worse off for land than he was then Omitting the canal tract I have no hesitation in saying that there is a general poverty throughout the tahsil, and with such a small unencumbered area I see no prospect of amelioration unless a series of exceptionally good years should come The area under cash rents may seem to show that at present the scarcity of land is not severely felt, but a great deal of the cash rent is on mortgaged land while the few large owners all take cash rents as a matter of course But besides this there are two reasons which make the small owner ready to let out part of his holding Except in the Taoru Circle land requires a great deal of ploughing and there are very few cattle with which to do it. To some extent the farmer is often forced to let out his land, though as a rule he is not by any means unwilling to give up one or two fields If the season is good he gets a fair rent, and in the Dahar and Bangar Circles the outturns will rule high and profits on the remaining portion will be large On the other hand if the season is bad, he will not get any rent, but he will be no worse

off then if he had retained it, and if the succeeding harvest be good, he may recover some arrears of rent as well, this he regards as clear gain In spite therefore of a fairly large cash rented area I think there is throughout the tahsil a most serious scarcity of land with its inevitable result of poverty and inability to stand out against the failure of even a single harvest.

Statement V shows the distribution of ownership according to the main agricultural tribes There is a large predominance of Meos, who taken as a whole are only fair cultivators In some parts they are distinctly good, but they need to see quick and certain results of their work or else they get disheartened and lazy In a village where Meos are found side by side with Ahirs or Jats the difference is surprising, though they never learn to adopt the thriftiness of those tribes Next in importance as regards numbers are the Jats, who are mostly found in the canal tract. These and the few Ahirs are by far the best cultivators in the tahsil All the available irrigation is carefully developed in their villages, and unremitting toil and care are bestowed to get the best value out of the land The remaining tribes are all inferior. Rajputs, whether Hindu or Mussalman, are very indifferent Owing to the strictness of their marriage rules they are rapidly decreasing in numbers, and as a rule in their villages holdings are large Both Brahmans and Khanzadas are equally bad, but the Gujars are better There are a few Mahajans and Kayasths, who are owners by purchase, and do not as a rule do any cultivating themselves Occupancy tenants are generally Meos or Jats with a fair sprinkling of privileged Brahmans or Faqirs. Apart from these there is no proper tenant class, the tenants-at-will being generally owners cultivating either in some other village or under purchasers and mortgagees

Transfers

16 Statements VI and VII contain detailed statistics of transfers, while in the following table the present state of transfers is compared with that in existence at the time of settlement. The top figure is the percentage of the area transferred, and below is the price in even rupees —

1	2	3	4	5	6	7
Circle.	Sales			Mortgages		
	Before 1857 to settlement	*Since settlement.*		*At settlement*	*Now*	
	Total area.	Total area	Cultivated area.	Total area	Total area.	Cultivated area
Taoru ...	4	3 3	4 0	3 25	17 7	23 6
	Rs 15	37	41	15	40	40
Dahar ...	1 8	7 5	6 2	12 9	30 8	37 9
	Rs 10	19	29	21	40	41
Bangar ...	1	1 6	1 6	3 2	21 0	23 7
	Rs 10	50	57	20	58	58
Total ...		4 3	3 9		24 3	29 2
		26	36	...	46	46

Of the sales 38 per cent and of the mortgages 63 per cent are to zamindars The quinquennial statement shows that the worst period was from 1895-96 to 1899-1900 Except that there has been a slight falling off in the last periods (due in great measure to the Land Alienation Act, and also to some extent to the fact that there is very little land left to mortgage) the area sold and mortgaged has steadily increased Not much reliance can be placed on the sale figures Some of them are fictitious transactions, but the majority, I think, are small sales with a view to reducing mortgaged property

The high proportion of sales in the Dahar Circle is a bad sign, as not only is the Meo habitually averse to parting with his land, but the size of holdings

great Sambhar Salt Lake would finally extinguish it. This has actually occurred, but so far from having a grievance against Government it would appear that the industry was for a long time bolstered up by Acts which conferred a monopoly upon it.

As in other tahsils, both pala and pula are found, but not in sufficiently large quantities to affect the tahsil as a whole Allowance has been made for them in the village assessments in the few cases where the crop has been large enough to justify an enhanced assessment, but this has not often been the case, as it is generally used by the zamindar himself for fodder, and the surplus available for sale is small. No outside professions are taken up, the people as a whole being dependent on the land. Some Rajputs go out as soldiers, but the Meo is not popular as a recruit, nor does his inclination lie that way He prefers not to leave his land unless forced to do so by poverty or some equally cogent reason, and then he does not as a rule return to his village at all.

CHAPTER III —CROP STATISTICS.

Jinswar returns

18. Detailed crop returns by soils for the years selected for the produce estimate are given in Statements VIII and IX. They only show the cropping on the settlement areas as modified by the patwaris at crop inspections This is important in the dahri and abi classification, where I suspect that the areas have been over-estimated The entries of nahri may be regarded as fairly correct, and in other respects there has been very little change.

Matured area

19 Statement X shows the area matured at each harvest in the various circles during the 21 years 1885-86 to 1905-06, with quinquennial averages In the Taoru Circle the average is wonderfully high This is due to the character of the soil, which is light and hardy Not only is less rain required, but it is capable of withstanding drought for a longer period than the heavy soils Moreover, most of the land is used for autumn crops, and as, even in a dry year, it is unusual for the monsoon to be a total failure there is always hope of obtaining at least a moderate harvest in the *rabi* except well-irrigated crops very little is attempted, and as the water is sweet the results are fairly good In the Dahar Circle on the other hand the cultivation is extremely precarious The soil is heavy, and requires a thorough soaking, though in many parts owing to the prevalence of kallar it is not good to have water standing for any length of time. The small matured percentage shows the difficulties with which the cultivators have to contend, as either excess or defect in the rainfall has a serious effect on the harvest In the Bangar Circle the high matured percentage is due, not to the intrinsic character of the soil, but to the fact of canal irrigation, which protects a very large area It will be shown elsewhere that this protection has probably been to some extent exaggerated, and that a larger failed area ought to have been allowed, but for the present it is sufficient to point to the irrigation as mainly responsible for the matured percentage.

Turning to the average for the five years selected for the Produce Estimate it will be seen that in Taoru it agrees almost exactly with the average of the 21 years In the Dahar Circle it is 6 per cent below, and in the Bangar Circle 4½ per cent above the average The explanation in each case is, I think, to be found in the dryness of the seasons.

Statement I shows that in 4 out of the 5 years the rainfall has been below the average In the Dahar Circle this has had a very perceptible effect The heavy land, which has been accustomed to get a thorough soaking has become hard and dry, and in many cases the resources of the cultivators have not been sufficient to enable them to plough such land with bullocks few in number and weakened by want of sufficient fodder In the Bangar Circle, on the other hand, the effect has been to extend the demand for canal irrigation, and thus increase the protected area.

20. The following statement shows in percentages the average areaof each important crop sown, matured, and failed on 100 acres of each class of land during the years selected for the Produce Estimate:—

Percentage of principal crops grown.

1	2	3	4	5	6	7	8	9
Crops	Taoru		Dahar.		Bangar		Total	Tahsil.
	Settlement	Now.	Settlement.	Now	Settlement.	Now.	Settlement.	Now
Jowar	1	2	16	10	31	12	19	9
Bajra	73	46	19	24	24	26	32	30
Mung	...	5	...	2	...	2	..	2
Moth ..	1	1	...	1	3	1	1	1
Til ...	...	...		1	...	1		1
Chaula . .	.	8			...	...	.	2
Cotton ..	3	3	14	10	11	13	10	10
Wheat ...	2	1	26	4		4	11	4
Barley ..	9	9	7	9	6	13	7	11
Gram .. .	6	7	3	9	10	12	6	10
Mixtures ..	1	2	7	9		2	3	4
Sarson .. .	..	1	..	4		2	..	2
Tara	..	1	..	1	.	1		...
Guar		10	1	7	1	7	1	
Charı .	..	1	..	6	..	2	...	3
Others .	2	3		3		1	2	2
Bejhar .	2	..	5	.	14	..	8	
Vegetables	..	..	1		...	.		.
Rice ...			1	.		..	..	...
Sugarcane ..				.		1	..	1
Total	100	100	100	100	100	100	100	100

21 The characteristic agriculture of the tahsil is that practised on the flooded and unirrigated lands in the Dahar and Bangar Circles. In the Taoru Circle the soil is sandy and the cultivation resembles that adopted in Rewari. Barley is the chief irrigated crop, the soil being too light for wheat as a rule; moreover wheat requires more water and care generally, and with the exception of the Ahirs the people are not sufficiently industrious to grow it. Gochni is grown on the best abi land, but the area is small. The only other irrigated crops are tobacco and zira, and the fodder crops kasni and carrots. The wells are not used for the autumn crops, except to grow a little charri. On the irrigated land the main crops are bajra mixed with pulses in the autumn and dofasli gram (if conditions are favourable) in the spring. A little cotton and juar are also grown on flooded land. As regards the method of preparing the soil, the time of sowing, and the amount of seed sown there is nothing to alter in the description already given for Rewari. For the same reasons I do not propose to give a detailed account of the nahri cultivation. The Hathin Circle, where all the canal irrigation is found, adjoins the Palwal Tahsil, and naturally the two systems are the same

The system of cultivation

On flooded lands the main crop is wheat. The best land is sown with wheat alone. Seed is liberally given, 30 sers being the usual though at the same time the minimum quantity. Provided that there is sufficient rain to bring down the floods the same land can be grown to a wheat crop year after year. Manure is given every third or fourth year, but the main essential is that the land should be properly ploughed. Not only is the soil a stiff clay, but frequent flooding adds to its original hardness, and the more it is broken up the better. This of course can only be done when it has been moistened by rain, and consequently the importance of the rainfall to this land cannot be over-estimated. It requires a good flooding during the monsoon, and yet the water must dry up sufficiently quickly to enable the land to be ploughed at the proper time The same remarks apply to the cultivation of gochni on the less heavily flooded land. As to bejhar, although the cropping returns show a

great deal of this crop on flooded land, it merely means that the field has not received sufficient flood water to make any appreciable difference, and is frequently a sign that the flooded area has been over-estimated. So far I have only dealt with the spring crop As may be imagined the land that is regularly flooded during the monsoon is not of much use for growing an autumn crop, but juar, bajra, cotton, and occasionally melons, are found To some extent the remarks made above about over-estimating the area apply here also Autumn crops are grown on land which, though classed as flooded, does not under normal circumstances get enough flooding to injure a standing crop. But this is not the only reason It often happens that some of the flooded land has not been available for a wheat crop owing to excessive flooding or drought. Under these circumstances if the zamindar waits for a year to get a spring crop, he not only loses all the benefit of the flooding, but even then will get nothing off his land if the season is abnormally wet or dry He therefore grows an autumn crop to be on the safe side If the rains are light, he has utilised the winter flooding and got a crop off his land—possibly a very good cotton crop if not, he only loses his seed, and can sow wheat

The chief difference in the case of unirrigated land is that more rest is required, and even with favourable conditions a spring crop could not be grown regularly year after year on the same field Cultivation is too dependent on the rainfall to admit of any definite system of rotation being employed, but bejhar and gochni, the two chief crops, are as a rule grown on land that has lain fallow for two harvests The following is the rotation which the zamindars say is best, but actually it is very rarely found —

Autumn.	*Spring*
Juar	Fallow
Cotton	Fallow
Bajra	Dofash gram.
Bajra.	Fallow
Fallow	Bejhar

If this system were adhered to there would be a much larger area under autumn than under spring crops, of course the preponderance is this way, but the proportion is not so great, the reason being that with an uncertain rainfall and insufficient cattle it is impossible to get the fields always under a crop, but if the conditions look likely to be good for a spring crop, every effort is made to use all the available fallow land. As regards the crops grown, bejhar is by far the most common spring crop. As a rule two parts of barley are sown to one of gram, the total amount being 25 or 30 sers Gochni is only grown on the lowlying land that gets some additional moisture Sarson is sown in the lines of these two crops Gram is also a popular crop If there are good September rains, it is sown as second crop after bajra, if the rains are light, it is put in fields that do not contain sufficient moisture to enable barley to be sown The crop neither requires nor it is benefited by very much rain but on the contrary is liable to be damaged by late winter rain with thunderstorms. I have not given any details of the number of ploughings, as this depends chiefly on the cattle available The land is so heavy that it cannot be ploughed *too* often, and the difficulty is to get the necessary bullocks, as the people are very badly off in this respect at present

Changes of cropping.

22 The appended statement shows the areas under all the most important crops in the various circles at settlement and now In Taoru the apparent difference in the bajra areas is accounted for by the fact that pulses were not separately recorded then but were shown as bajra The present total of bajra and pulses is 70 per cent so there has been no real change The remaining figures are all very similar In the Dabar Circle the area under jowar has decreased, but the total of autumn cereals is considerably larger than before This is probably due to the recent bad seasons, and to the fact that the flooded area is smaller than it used to be Both these causes would tend to increase the area under autumn crops Cotton requires good rain at sowing time, and as this is not always available the increase has appeared in the cereals and not in the more valuable crop The settlement percentage of cotton looks as if it was an over-

estimate, but during village inspections I have frequently found that Mr. Channing has noted on the very fine crops of cotton grown in a village which now hardly ever produces any at all The great decrease in the area under wheat is also attributable to the same cause. The wheat area fluctuates according to the seasons, and we may safely say that neither set of figures represents a true average, the settlement figures being too high, while the present area is undoubtedly too small. It should be noticed that the present figures for gram include bejhar, for which no separate column has been allotted in the records. In the Bangar Circle the introduction of canal irrigation has caused a very real change in the cropping, which is hardly brought out by the figures. The area under cotton is almost the same although there has really been a great development since the advent of the canal This must mean that the area was very much over-estimated at last settlement. On the other hand there has been a change in the jowar cropping which is rather hard to understand To some extent the canal is responsible, as there is not such need for autumn fodder as there used to be, and jowar does not answer on canal land, it is however clear that the settlement entries include chari, which was not recorded at all. The bajra percentages show that it is not a case here, as it is in the Dahar Circle, of jowar being given up for bajra. The percentage of wheat is small, but it is not grown on unirrigated land at all, and there is no flooding to speak of in this circle

1	2	3	4	5	6	7	8	9	10	11	12	13
Assessment Circle	Harvest	Crops	AREA IN PERCENTAGES									
			Chahi.	Nahri	Abi	Dahri.	Abi and Dahri	Chahi and Nahri	Narmot	Magda	Bhur	Total
TAONU	*Kharif*	Jowar	19				2 85		5 00	2 73	1 16	2 14
		Bajra	01				37 66		48 14	55 71	49 14	46 27
		Mung					2 55		7·06	5 75	5 71	4 69
		Moth					1 07		3 46	1 48	1·09	1 40
		Guar					14 87		13 71	11 90	11 91	10 09
		Chaula					2·37		9 50	9 00	13 59	8 45
		Cotton	70				1 80		5 14	3 49	97	2 59
		Chari	17				95		4 30	1 21	49	98
		Vegetables	31							04		07
		Others	32				30		1 41	1 07	·30	81
		Total crops harvested	1 73				54 24		97 81	92 38	85 26	77 69
		Total area failed					12 11		12 84	6 61	10 54	6 85
		Total area sown	1·73				66 35		10 65	98 99	95 80	84 54
	Rabi	Wheat	7 04				6 58		1 41	·24	20	1 42
		Barley	42 15				8 13		6 42	3 87	1 76	8 69
		Gram	26				7 24		13 86	10 08	3 02	7 39
		Sarson	2 21		..		1·71		1 80	73	39	91
		Tara	15				42		1 54	69	22	53
		Others	8 45				15 61		11·81	1·03	1 52	2 90
	Total of both harvests	Total crops harvested	60·26				39 61		36 81	16 64	7 19	21·84
		Total area failed	98				10 86		16 82	9 10	6 69	7 80
		Total area sown	61 24				50 50		53 60	25 74	13 88	29 64
		Total crops harvested	61 99				93 88		134 65	109·02	92 45	99 53
		Total area failed	98				22 97		29 66	15 71	17 23	14 65
		Total area sown	62·97				116 85		164·31	124 73	109·68	114 18
DHAS	*Kharif*	Jowar	10		60	1 60		15·99		5 41	1 15	7·33
		Bajra ..			39	1 14		25 84		33 00	89 12	17 75
		Other cereals	02		02	09		50		26	12	·96
		Mung			·02	06		1 99		2·01	1 80	1 17
		Guar ..		..	11	31		7 10		11·09	12·98	5·38
		Other pulses		..		09	...	1 15		2·36	2·07	1·02
		Cotton	24		18	1 92		14 41		9·98	2 06	7 37
		Chari	13		·05	41		6 39		4 38	1 73	3·07
		Others	·84		·07	·08		2 13		1 10	·29	1 02
		Total area harvested ..	1·34		1 44	5·71		77 53		70 19	62·22	45·27
		Total area failed	·03		3·28	3 42	..	19 17		16·31	15·30	12·21
		Total area sown	1·37		4 72	9 13	..	96 70	..	86 50	80·61	57 48

1	2	3	4	5	6	7	8	9	10	11	12	13
			Area in percentages									
Assessment	Harvest.	Crops	Chahi	Nahri	Abi	Dahri	Abi and Dahri	Chaknot and Narmot	Narmot	Magda	Bhur	Total
Dahar—concld	Rabi	Wheat	7 16		3 63	4 64		2 75		2 38	2·01	3 42
		Barley	32 64		2 78	2 17		7 98		9 46	5 48	6 65
		Gram	13		2·81	1 90		14 30		5 81	1 65	7 04
		Other cereals and pulses	2·66		10 10	6 69		8 29		3 86	2 15	6 67
		Sarson	87		·99	·99		4·91		2 44	99	2 64
		Tara			03	34		88		1 17	58	62
		Others	5 18		26	95		05		02	01	51
		Total area harvested	48 64		20 60	17 68		39 16		25 14	12 87	27 55
		Total area failed	2 45		2 21	3 48		20 13		14 77	10·44	11 61
		Total area sown	51 09		22 81	21 16		59 29		39 91	23 31	39 16
	Total of both harvests	Total area harvest	49·98		22 04	23 39		116 69		95 33	75 09	72 82
		Total area failed	2 48		5 49	6·90		89 30	..	31 08	28 83	23 82
		Total area sown	52,46		27 53	30 29		155 99		126 41	103 92	96 64
Bangar	Kharif	Jowar		63	10			21 61		6 80	4 13	11 62
		Bajra		03	21			35 53		40 56	35 28	24 16
		Mung		01				2 78		2·68	1 96	1 78
		Moth		26				1 27		2 69	4 07	1·28
		Guar		23	·21			9 93		7 62	7 88	6 27
		Other cereals and pulses	06	55	10			1·02		49	42	73
		Sesamum		25				1 48		80	33	89
		Sugarcane		4 96				02		·01	..	1 34
		Cotton	14	26 56				8 99		5 82	2 41	12 25
		Fodder		60				3 30		1 43	53	1 94
		Others	25	1 71				54		24	06	76
		Total area harvested	45	35 79	62			86 4		69 14	57 07	63 02
		Total area failed		28	1 25			8 61		7 14	9·57	5 74
		Total area sown	45	36 07	1 87			95 08		76 28	68 64	68·76
	Rabi	Wheat	8 49	11 87	3 02			65		09	04	4 01
		Barley	28 61	11 13	62			10 97		14 49	13 42	12 45
		Gram	29	7 75	32			15 36		11 77	5 29	11 14
		Other cereals and pulses	2 71	4 89	3 95			59		31	14	1 83
		Sarson	1 84	1 49	62			1 83		2 10	2 13	1 78
		Tara				..		1·		24	16	11
		Others	1 97	92				0·				37
		Total area harvested	43·91	38 05	8 53			29 57		29 00	21 88	31 69
		Total area failed	92	87	73			18 39		13 10	12·55	9·11
		Total area sown	44 83	38 92	9 26			42 96		42 10	33 73	40 80
	Total of both crops	Total area harvested	44 36	78 84	9 15			116·04		98 14	78 25	94 71
		Total area failed	92	1 15	1 98			22·00		20 24	22 12	14 85
		Total area sown	45 28	74·99	11 13			138·04		118 38	100 37	109 56

CHAPTER IV.—RENTS AND TENANCIES

Cultivating occupancy.

23. The following statement shows the percentage on the total cultivation of land held by the owners themselves and by the various classes of tenants —

1	2	3	4	5	6	7	8	9	10	11
Circle	Cultivated by the owners or held rent free		Held by occupancy tenants paying				Held by tenants at-will paying			
			Cash rent		*Kind rent*		*Cash rent*		*Kind rent*	
	Settlement	Now	Settlement	Now.	Settlement	Now	Settlement	Now	Settlement	Now
Taoru	62 2	60 9	12 6	11 7			22 8	24 3	2 4	3 1
Dahar	70·0	56 3	7 1	6 8	1		21 5	25 9	1 3	11 0
Bangar ,,	63 8	62 4	7 1	9 0			29 0	21 6	1	7 0
Total	66 0	59 7	8 1	8 7	0 4		24 86	23 8		8 7

The above figures do not indicate any great changes in the proportion of land let out or in the character of the tenancies The Dahar Circle is the only one where the owners' cultivation has been seriously curtailed. The increasing popularity of kind rents throughout the tahsil also deserves mention Both features are the direct result of the bad seasons, though the latter is of quite recent growth, whereas the former can be traced back to the famine of 1878 Tenants are of the usual kinds The form of partnership on well lands in vogue throughout the district is extremely common in this tahsil If it becomes necessary to work the wells an owner is generally obliged to take in his tenants as partners, as otherwise he would not be able to afford the expense, nor probably has he sufficient bullocks In such cases no difference is made in a cash rent, but the rate for kind rents is lowered to ⅓rd The form of partnership is the same as in Rewari

Kind rents

24 Statement XI shows the rates at which kind rents are paid. The figures indicate an overwhelming preponderance of payments at ½ on both unirrigated and irrigated lands In the case of well lands however the statistics are misleading The explanation given above about partnerships shows how in the Dahar and Bangar Circles owing to the peculiar circumstances ⅓ may be agreed on but not paid if the well is used In the Taoru Circle, where irrigation is regular, batai is most unusual on well lands that are being watered, but not nearly so rare in the case of well lands on which an unirrigated crop is to be grown The difference is fairly represented by the areas in the two columns of ⅓ and ½, and when actual instances were examined it was found that the irrigation rate was always ⅓ and not ½ On canal land the rate is ½, but it is usual to find that all expenses are shared in the same proportion In the case of sugarcane cultivation this indicates a difference from the practice prevalent in the Palwal Tahsil, but it is merely a difference of detail The landlord is made to share in other expenses which were not included when the rate was ⅓, and the result is almost exactly the same I have accordingly adopted the calculations given in the Palwal Report for this tahsil The cost of cultivating an acre is Rs 22 and the canal dues as shown in paragraph 11 (*b*) amount to Rs 8-13-0 On all unirrigated land ½ is regularly taken, and a share of the straw as well, the tenant being expected to pay the kamins These conditions are extraordinarily severe In the adjoining Tijara

Tahsil of Alwar the figures given in section 115 of Mr. O'Dwyer's Report show that rates of $\frac{1}{3}$ and $\frac{1}{2}$ were taken in almost equal proportions. This however was the only tahsil out of the five dealt with in that Report in which this state of things existed, and the rate adopted for the Produce Estimate was $\frac{2}{5}$. As might be expected under these circumstances the area under produce rents is not large. It has however increased since last settlement, when both Mr Channing and Mr. Wilson found this class of rent almost unknown The rate too has risen as the following table shows —

1	2	3	4	5
	Half	Two-fifth	One-third	One-fourth
Settlement	17 7		82 3	
Now ..	91 3	1 5	6 8	. 4

With such a small area it seems reasonable to suppose that only the worst land was so rented, and consequently a low rent was taken At the present time there is a decided leaning towards produce rents. The tenants clamour for them because they have not had a really good harvest for so long, and when this does come it is certain that the landlord will try to get back a portion at any rate of the arrears if the land is cash rented. Probably the total amount so collected does not exceed $\frac{1}{3}$ the produce, but the cultivator likes to feel that if nothing matures he will not have arrears of rent to pay in addition to his other expenses Where the character of the soil is so even a slight increase in the popularity of a rent is sufficient to bring the better soil under its influence, and this in itself would tend to raise the rate and so retain the popularity of cash rents Lastly, there is the influence of competition Though population has not increased to any great extent since last settlement yet the poverty of which this is one sign has led to a good deal of mortgage, and there is now a very real scarcity of unencumbered land The original owner must cultivate to keep alive, and as a rule he stops on as a tenant paying a high rent

The result of all these influences has been that the area under kind rents is almost all paying at the high rate I have therefore accepted it for the produce estimate, but it does not mean that the resulting standard would be a fair one to levy from the owners and occupancy tenants, who together cultivate 68 6 per cent.

There are no zabti rents at all in this tahsil, but as there is a small area under crops, for which as a rule a cash value is taken, I have made assumptions for the purposes of the Produce Estimate. The area is not sufficiently large to affect the general result, and the assumed values may be taken as fairly representative.

Cash rents

25 The table in paragraph 23 shows the area cultivated by tenants-at-will paying cash rents Sixty per cent of this is in the hands of tenants paying at other than revenue rates, and these form the basis of a cash rent estimate Mr. Channing in his Nuh Report section 26 says "Competition rents are very rare Seventy per cent of the lands held on cash rents are at revenue rates only, so that I have not been able to give much weight to the prevailing rent rates in framing my assessments I have however selected a few villages in each circle in which rents other than customary seemed to prevail, and analyzed their rates" It is difficult to see exactly what plan was adopted The average rents given by Mr. Channing seem to be far below his rates, but when dealing with the various circles he compares an assessment at his assumed rates with that given by half the cash rents in the selected villages and the difference though still considerable is not so great as the figures in section 26 lead one to expect, while in the Taoru Circle the two sets of figures are almost identical. However no use was made of them in assessing, and it is more important to

note that at revision 6 per cent of the total cultivated area paid cash rents not directly dependent on the revenue rate at an average of Rs 2 per acre This proportion has risen to 9 per cent, but the 60 per cent shown as cultivated by the owners includes a great deal of mortgaged land cultivated by the mortgagor at a high cash rent The following statement shows the area paying a cash rent with the rate per acre at revision and yearly from 1891-92 to the present day:—

1	2	3	4	5	6
Year	Area in acres	Rent	Rate on		Total
			Irrigated	Unirrigated	
		Rs	Rs a	Rs a	Rs a
1891-92	25,523	64,590			2 8
1892-93	26,940	69,553			2 9
1893-94	27,711	73,013			2 10
1894-95	28,301	76,380	4 0	2 8	2 11
1895 96	28,750	78,813	2 13	2 12	2 12
1896-97	28,817	80,372	3 10	2 10	2 13
1897-98	29,952	84,721	4 4	2 9	2 13
1898 99	29,979	89,192	4 11	2 11	3 0
1899-1900	30,112	88,654	4 9	2 10	2 15
1900 01	28,822	86,776	4 9	2 11	3 0
1901-02	29,077	92,415	5 8	2 11	3 3
1902 03	29,983	98,110	3 15	3 2	3 4
1903 04	29,980	96,673	3 15	3 2	3 4
1904 05	29,883	96,359	3 15	3 2	3 4
1905 06	30,316	98,985	3 12	3 3	3 4

The statement shows that a very extraordinary change has taken place during the past five years Up to the year 1902-03 there was a marked difference between the irrigated and unirrigated rates, but since then there has been a close approximation between the two classes In the Dahai Circle there is no difference now at all, and in the Bangar Circle the two rents are nearly the same The regular well irrigation in the Taoru Circle has prevented it from being affected by this The real fact appears to be that in the other two circles land is let out in May before it is known whether it will be irrigated or not, if it becomes necessary to work the wells, it means that the season is not good, and with the scarcity of bullocks and poverty prevalent throughout the circles the owner prefers to get what help he can from the tenant in working the well, and no extra rent is charged Moreover, the owner knows that in a bad year the only chance of getting a crop at all is to irrigate the field, and unless this is done he will not be paid any rent whatever

Turning to the method of analysing the existing rents I quote the following description from the Rewari Report "The rents in sub-heads (*d*) and (*g*) of the Rent Statement are of course the only ones capable of affording data for a cash rent assessment These were first divided into mixed rents and the

rents paid on single classes of land, and each of these divisions was then further sub-divided into—

(*a*) Rents paid by mortagagors to mortgagees.
(*b*) Rents paid by tenants-at-will to mortgagees
(*c*) Rents paid by tenants-at-will to owners.
(*d*) Rents paid by sahjis to owners"

The majority of rents belong to class (c), and it is there alone that the genuine competitive rents can be found in any quantity. Rents in class (a) were usually rack rents or else included a payment of interest on the loan, and so had to be rejected Those in class (*b*) varied a good deal · sometimes they were exorbitant but on the whole they did not differ very much from those taken by owners. Those in class (*d*) were as a rule too low The usual kinds of abnormal rents were met with and rejected at village inspections In the Taoru Circle cash rents are not common, and no customary rate for land was admitted In the Dahar and Bangar Circles however it was usual to find a customary rate of Rs 2-8 or Rs 3 per bigha on all soils except bhur, for which no such rate existed Wherever kallar is found in a field to any extent it was invariably regarded as a good reason for taking a lower rent, and if the field was really bad a very considerable difference would be made On the other hand with the exception of rack rents it was unusual to find the customary rate exceeded. The result is that the total rents work out somewhat lower than the customary rate though the latter is always used as a guide in determining the rent of average fields

Statement XV shows the area under true cash rents after the elimination of abnormal rents The tendency to be below the customary rate rather than above it is slightly more evident. This shows that the proportion of rack rents rejected was greater than that of small payments by privileged tenants, and this is undoubtedly the case throughout the tahsil With the present poverty privileged tenancies are rare Those who could have established occupancy rights, and the remainder have been forced to pay at the usual rate or else give up the land I do not think there is any doubt that the rents represent the true letting value of land In the Dahar and Bangar Circles the soil is most extraordinarily uniform in character, the only difference as a rule being one of saltness With such a large proportion of mortgagee's rents we may feel confident that good as well as bad land has been let out, and this in conjunction with the uniformity already noticed suffice to make the cash rents more representative of general conditions than the small proportion of land so rented might seem to warrant. By this I do not mean to say that the rents as they stand represent a fair letting value of land, and consequently a fair basis for assessment On the contrary I think they are far too high, but there is no doubt that any one wishing to let out an average field can count on obtaining a tenant at these rates, and similarly there is no doubt that a man wishing to cultivate a normal field will, unless special reasons exist to the contrary, have to pay at a rate closely approximating to that shown in the statement This state of affairs has been induced by the circumstances of the tahsil The reasons which have led to the great increase in transfers have been already noted, but the effect of this upon rents cannot be too strongly emphasised With only a small amount of land at their disposal, and practically no culturable waste to fall back on, the people have been obliged to sell and mortgage until each owner has a very small property left unencumbered A keen competition has been set up, and the owners—following the lead of the mortgagees—exact high cash rents for their land These rents obviously could not be paid in a bad year, and this was everywhere admitted by owners and tenants alike There are very few large owners in the tahsil, and hardly any of these keep accounts, but when inspecting the village of Hirantbala the Kayasth owners showed me their books According to the Government papers the rental is Rs 3,136, but the average collections for 16 years are only Rs 2,360, or 75 per cent The property is well and carefully managed, and every effort is made both by the owners and their agent to keep up cultivation and get the maximum value out of it As an additional incentive to this I may mention that in spite of bad harvests they have never been held to require any relief, and the full Government revenue has invariably been exacted We may therefore feel sure that no undue leniency has been displayed by them to their tenants.

The following table compares the rates of cash rents paid on the various classes of soil before and after the elimination of abnormal rents in the villages that have been inspected.—

1	2	3	4	5	6	7	8
Circles	Rents	Chahi	Nahri	Abi	Dahri	Barani	Bhur
		Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p
Taoru	Total rents	5 6 11		3 5 4	3 4 0	2 6 11	1 8 8
	Corrected rents	5 2 0		3 1 0	3 2 0	2 5 8	1 6 0
Dahar	Total rents	4 1 7		3 14 1	4 0 1	4 4 6	2 9 7
	Corrected rents	3 14 0		3 13 0	3 15 0	4 1 0	2 10 0
Bangar	Total rents	4 7 7	3 4 11		2 4 0	3 8 7	1 12 10
	Corrected rents	4 6 0	2 12 0		3 0 0	3 4 4	1 11 0
Total Tahsil	Total rents	4 14 7	3 4 11	3 13 5	3 15 11	3 6 9	1 15 8
	Corrected rents	4 10 0	2 12 0	3 11 0	3 14 0	3 5 1	1 14 0

The general result of the analysis has been to slightly lower the rate on all soils This is because owing to the scarcity of land there are very few tenants at privileged rates, while on the other hand the tendency towards charging excessively high rents is most pronounced The nahri rents, as I have pointed out elsewhere, are quite unreliable Practically all are paid in two large villages in which no change in the rate has been made in spite of the introduction of canal irrigation To have eliminated these would have meant that only a few acres of nahri rents could have been shown, and in neither case could the results have been accepted as a fair test of the rent of this class of land I therefore retained all these rents and only eliminated a few rents which were extraordinarily severe There can be no doubt that the rents have been falsified in both these villages and it is unfortunate that there are not enough cash rents elsewhere in the tahsil to give an idea of what the proper rate should be I have neglected the nahri rents altogether and am applying the chahi rate to the nahri area for the purposes of the cash rent estimate Unfortunately well irrigation in this circle is inferior and the result is that the cash rent estimate is unduly low Chiknot, narmot and magda have been classed together as barani as the differences between the various rates are so slight as to be negligible

CHAPTER V —HALF-NET-ASSETS BASED ON BATAI

Character of the selected harvests

26 The years selected for the produce estimate are the years 1898-99 to 1903-04 excluding the famine year 1899-1900 The spring harvests have been almost uniformly bad, but the matured percentage of the five years is 87, which is only slightly below that of the 21 years The character of the harvests is given below.—

Kharif 1898 —The monsoon was delayed, but there were fair rains in July and August, which allowed sowings to be made Unfortunately the September rains failed, and the harvest was not so good as at one time appeared likely.

Rabi 1899 —A fairly large area was sown but the winter rains failed, and the harvest was not good A little rain in December and February saved the situation, and eventually the harvest was about average

Kharif 1900 —There were abundant monsoon rains, very well distributed and the harvest was consequently above the average

Rabi 1901 —The rains in September and October were favourable for sowings, and a large area was got ready. Conditions were good throughout, and a splendid crop was obtained.

Kharif 1901.—Good rain in June permitted extensive sowings to be undertaken, and with moderate conditions in July and August the prospects were good The failure of the September rains however altered the position, and there was eventually an average harvest

Rabi 1902.—Sowings were rather restricted, and as no rain fell between October and April the result was disastrous, the failed area being almost as large as that matured. The conditions were especially unfavourable for the Dahar Circle, but even the Bangar Circle with canal irrigation suffered heavily, while Taoru was only better because practically nothing but irrigation was attempted

Kharif 1902.—A good harvest In both the Taoru and Bangar Circles the amount of rain was sufficient, and though the Dahar Circle would have been better for a little more the actual area matured was large, and the percentage on sowings unusual for this tahsil

Rabi 1903.—Sowings were not so large as might have been expected with good rain in September and October, but the crop as a whole did moderately, except in Taoru where the failure on unirrigated land was very heavy The winter rains were below the average and the harvest may be characterised as rather poor.

Kharif 1903.—The rains came a little late, but were on the whole favourable for sowings, which were consequently above average As in 1898 the September rains failed, and owing to the late sowings the damage was severe. In the end the harvest was rather below the average.

Rabi 1904.—Sowings were somewhat restricted, and as there were no winter rains the crop looked like being a total failure A good fall of rain in March just prevented this, but the unirrigated harvest was very poor throughout the tahsil.

The harvests may be summarised as follows —

1	2	3
	Kharif	Rabi
1898-99	Average	Average
1900-01	Fair	Very good
1901-02 ..	Average .	Poor
1902-03	Good .	Poor
1903-04 ...	Below average	Bad

Crop entries

27. The failed area returns made by the patwaris seem fairly reliable, except in the case of the Bangar Circle where owing apparently to the way in which no kharaba has been granted on nahri lands, there has been a distinct tendency to under-estimate the amount of failure The average kharaba for nahri lands for the years selected for the produce estimate is only 1·5 per cent, the figures being —

	Acres
Matured .	17,185
Failed .. .	267
Sown .	17,452

The failed area percentages in the various circles are given in the table of leading statistics in Chapter I of Part III The small unirrigated proportion in Taoru is due to the fact that the soil being light and hardy requires less rain. Moreover bajra is the principal crop and the failure is consequently less than in those parts where unirrigated rabi crops are attempted. I have therefore made no further deduction although 15 per cent is very small In the Bangar Circle both the irrigated and unirrigated percentages are too small and I propose to increase them by 10 per cent The percentages will then be—

Irrigated . 11¾ | Unirrigated ... 28

The difficulty of correctly estimating the proportion of jowar and chari has been noticed in the reports on other tahsils, and exists here also. At present jowar is regarded mainly as a fodder crop, and many fields are sown rather more closely than is advisable for a jowar crop with the result that the grain suffers, and the outturn is poor. It is hard to determine how far this is due to the drought, certainly there is now a tendency to regard a fodder famine as probable, and to take every precaution against it Moreover the jowar crop has not done at all well of recent years, and it is not by any means popular as a grain crop even in the Dahar Circle.

Yields.

28. Statement XII gives the data on which the assumed yields are based. Paragraph 31 of the Rewari Report sets out the reasons why the crop experiments in this district have not been very reliable In the Nuh Tahsil the evidence of crop experiments would never be satisfactory, as the harvests tend to be very much above or below the average, with the result that the selection of fields becomes extremely difficult At last settlement a number of experiments were made without any reference to the character of the harvest under observation, the object being to get a large number of outturns recorded and strike the average This is open to the same objection that the result is liable to be either above or below a true average. The people themselves give estimates which as a rule seemed to me fair, and I have generally accepted these yields as correct when the same estimate is given over a large area in different villages A glance at the statement of matured areas will serve to illustrate my meaning The average matured percentage for 21 years is 90·7, but during that time the number of years in which the matured percentage is either above 100 or below 80 is 14, while only once has a harvest approached within one point of the average Unfortunately the situation of the Nuh Tahsil does not admit of much useful comparison with outside districts The Tijara Tahsil of Alwar State adjoins the Taoru Circle and seems to correspond fairly with it, but the remaining tahsils of Alwar do not afford any help The Dahar Circle is the one in which the variations of the seasons are most prominent, and for this no satisfactory comparison is possible

I now proceed to discuss the various yields assumed for the produce estimate

Kharif Crops.

(a) Jowar 9 per cent

This is not an important crop except in the Dahar Circle, where the soil is suited to it, and the outturns on flooded land are sometimes very good I have taken 280 sers on irrigated and flooded lands in the Dahar Circle, and 240 sers on these lands in the other two circles The outturns for barani are 220, 200 and 140 sers in the Dahar, Bangar, and Taoru Circles respectively, and for bhur 160, 140, and 120 sers

(b) Bajra 30 per cent.

Bajra is the great autumn cereal, and is especially suited to the light lands of the Taoru Circle where practically nothing else is grown Very little is irrigated, and I have assumed 280, 240 and 200 sers in the three circles, the barani outturns being 200, 180 and 140 sers On bhur lands I have taken 180 sers in the Dahar Circle, 160 in Bangar and 140 in Taoru.

(c) Pulses 14 per cent

The yield of all the pulses is difficult to ascertain with any accuracy, as they are practically never grown alone I have made no difference between the various soils or circles, the outturn of mung being 140, and of mash and moth 160 sers. For guar I have assumed a cash rate, while chaula has been put at 160 sers throughout the tahsil, and til at 120

(d) Sugarcane 1 per cent

Cane is only grown on canal lands It is not very popular, and on the whole the outturn does not seem to be good 800 sers is as high as we can safely go though larger estimates are frequently given A little barani cane has been put at 480 sers

(e) Cotton 10 per cent

This is a most important crop the yield of which is very hard to fix for many reasons In the first place it is almost impossible to tell what is going to be an average field This has led to an exceedingly high estimate of the

outturn of cotton, as the experiments have been probably above the true average. The usual reply given by the zamindars is that the outturn is 200 sers on all except the worst lands including canal crops. This is not quite accurate. As far as I could judge canal fields are usually better than unirrigated, though of course the chief advantage of the canal cotton crop is that it enables the farmer to hedge against a total failure. The crop is sown earlier than the unirrigated, and is ready about September; consequently heavy late rain is not needed, whereas for the unirrigated crop it is essential It is not possible to get a good canal crop and a good unirrigated crop in the same year, as one or the other is bound to suffer The general assumption (borne out by the five years' average and the rainfall statement) is that dry years predominate and for this reason alone we might fairly put the nahri yield higher than the unirrigated I propose to take 200 sers on chahi, nahri, and flooded lands in the Dahar and Bangar Circles, and 160 on the barani and bhur; the light Taoru lands are not so well suited to cotton cultivation, and I have assumed 160 sers on chahi and flooded lands, 120 on unirrigated, and 100 on bhur.

Rabi crops

(a) Wheat 4 per cent

Wheat is not nearly so popular a crop as it was at last settlement On well lands it is very little grown I have assumed 520 sers in Taoru where it is carefully cultivated, the Ahirs being the only people who grow it to any extent, in the Dahar Circle I have taken 440 sers, and in the Bangar 400. The abi and dahri wheat of the Dahar Circle I have put at 400 sers It is only grown on the very best land, gochni being the regular crop on the average land In a good year the outturn is very much higher than this, but I do not think it would be safe to assume a higher average On the barani lands I have taken 240 sers and on bhur 140 On canal lands the crop does well, but the outturn is never high I take 360 sers on both nahri and abi land in the Bangar Circle and on abi in Taoru On the Taoru dahri which is somewhat inferior I take 320 sers. The Bangar barani is superior to that of Taoru and I take 240 sers in the former against 160 in the latter, the bhur outturn being 140 in both.

Barley 11 per cent

Barley is the staple well crop in the Taoru Circle In the other circles it is not grown to the same extent, owing to the peculiarities of well irrigation there For Taoru I have taken a yield of 640 sers on chahi and 280 on abi and dahri. The unirrigated crops are poor in this circle, and I only assume 180 sers on barani and 160 on bhur In the Dahar circle my yields are 460 sers on chahi 360 on flooded land, 320 on barani, and 220 on bhur, while in the Bangar Circle they are 500 sers on chahi, 440 on nahri, 300 on abi and barani, and 200 on bhur It will be seen that my yields for this crop differ considerably from those adopted by Mr Channing at last settlement not only in the various circles but also and more particularly in their relation to each other. I am convinced that it was wrong to suppose that the chahi outturns in the Dahar and Bangar Circles were higher than those in Taoru, where the well cultivation is much more careful On the other hand there can be no doubt that the unirrigated crops are better in those circles than in the light Taoru land I have given a lower outturn for barley than wheat on flooded lands because neither barley nor bejhar are grown on land that has received a proper flooding, and the sign that a field has benefited by the floods beyond the ordinary barani land is that it is possible to grow wheat on it instead of barley. The result is that flooded barley is little better than unirrigated while the wheat is very superior

Gram 10 per cent.

Gram is not an irrigated crop at all It is sometimes mixed with wheat or barley on well lands, the original intention having been to grow the crop without irrigation, and water being only given as a last resort On canal lands it is grown as a second crop after cotton and then a little water is often required, but the result is no better than on unirrigated lands The difficulty in fixing a yield for gram is that no separate column has been given to bejhar in the registers, and consequently the area shown as being under gram includes that grown on fallow land and the dofasli gram sown after bajra However when dofasli gram is grown to any extent it means that the conditions have been favourable, and the outturn is generally good, so the difference is not so great as might have been expected. Mr. Channing's rate of 400 sers per acre in the Dahar Circle

seems to me too high for an all round rate, though on the best lands more than this is frequently obtained In the Taoru Circle I have taken 340 sers on chahi, 320 on flooded lands, 20) on barani and 160 on bhur The unirrigated rates are if anything a little high, but gram is only grown in Taoru when conditions are particularly good and the results are better than might have been expected considering the light soils of the circle In the Dahar Circle I have made no difference between the chahi and unirrigated outturns as gram is not an irrigated crop On flooded land however it does well and I have assumed 360 sers there against 320 sers on chahi and unirrigated Practically no gram is grown on bhur, and when it is it usually means that the field possesses some distinct superiority, and I have therefore taken 240 sers In the Bangar Circle I have taken 400 sers on chahi and nahri, 280 on abi and unirrigated, and 220 on bhur.

(d) Oil seeds 2 per cent.

Oil-seeds are very little grown in this thasil Sarson is grown in the lines of bejhar and gochni crops, and tara similarly in the lines of gram fields I have taken 160 sers on unirrigated land, 140 on chahi, nahri and flooded, and 120 on bhur throughout the tahsil except in the Taoru Circle where neither crop is much grown and 140 sers seems enough on unirrigated as well

(e) Others 8 per cent.

No zabti rents are found, but as there is a small area under crops for which a cash value is usually demanded I have assumed the same rates as are found in the rest of the district

Straw

The invariable custom in this tahsil regarding straw is that the landlord takes the same share of the straw as he does of the produce However with the scarcity of grazing prevalent throughout the tahsil it usually has to be consumed for fodder, and practically none can be sold I have therefore included it in the gross produce estimate, but have omitted it from the net assets calculation

The outturn of straw has been assumed to be three times that of the grain for jowar, twice for bajra, and one-and-a-quarter times for wheat, in all other cases it has been supposed to be equal to the grain The value of the straw of rabi cereals and jowar has been fixed at three annas per maund, that of the other kharif crops and gram being put at two annas The straw of oil-seeds is of no value, and has consequently been neglected

29 The sanctioned prices of the present settlement are given below in annas per maund, and compared with those of last settlement .—

Prices

1	2	3	4	5	6	7	8	9	10	11	12	13
	Jowar.	Bajra	Mung	Moth	Til.	Cane	Cotton	Wheat	Barley	Gram.	Sarson.	Taramira
Prices at last settlement	17	19	21	18	43		49	24	17	18	32	22
Sanctioned now	20	23	30	22	60	45	64	32	22	23	45	32
Rise per cent	18	21	43	42	40		31	33	29	28	41	45

Mr Channing's prices were the average of the 20 years 1854—1873, while the present ones are based on the harvest prices of the last ten years extracted from bannias' books The sanctioned prices are for the whole district Mr. Hamilton in his Preliminary Report commented on the fact that there was no difference in the Nuh Tahsil in spite of its isolated position. The reason of this appears to be found in the practice amongst the Meos of borrowing money on a crop before it is grown, if it fails the borrower has to pay the full market value of the crop, though of course the money was lent at a very much lower rate. This has tended to inflate the harvest price of crops to the detriment of the farmer. The all round rise according to the method of calculation given in

paragraph 326 of the Settlement Manual is 24 per cent. Bajra is the only crop which attains a high percentage, but the rabi crops wheat, barley and gram taken together are responsible for practically the whole of the spring demand, and cotton with bajra for the autumn. As has been pointed out in the other reports the effective rise in prices is not of much importance as the assessment is being based on cash rents.

Fodder crops

30. The area available for grazing is very small throughout the tahsil and what there is produces such inferior grass as to be of very little assistance. Cattle are therefore almost entirely stall-fed, and large fodder deductions are necessary Charri and gowar are fodder crops and as elsewhere will be entirely neglected

Apart from these regular fodder crops it is difficult to determine what proportions of the various crops the tenant would be allowed to cut for fodder, as the area under kind rents is so small Undoubtedly large deductions would have to be made, and I accordingly make the following assumptions Irrigated jowar is regularly cut for fodder and may be entirely neglected, but the case of unirrigated jowar is more difficult. In Rewari 50 per cent of the jowar grown on magda and bhui was deducted, while in the Tijara Tahsil of Alwar Mr O'Dwyer only deducted 12 per cent. I propose to deduct 25 per cent. on all soils in this tahsil, and 20 per cent of the pulses which though not grown for fodder are readily sacrificed to make room for a rabi crop All sarson on irrigated land should be deducted, and 20 per cent of the remainder, as though a valuable crop it is exceedingly delicate, and is in consequence largely cut for fodder Five per cent must also be allowed for the barley that has to be given up These deductions are considerably more than those granted in Alwar, but with a salt soil and practically no grazing I do not think that they are excessive

Menials' dues and hired labour

31. Menials' dues are invariably paid by the tenant and not from the common heap There is therefore no deduction to be made on this account, but when assessing some account must be taken of the very large area cultivated by the owners themselves, as on all of this the expenses of menials' dues have to be met by the person who is responsible for the land revenue

The only crops for which hired labour is invariably required are cotton and cane Cotton pickers get 10 per cent, cash payments being practically unknown. For hoeing cane fields I propose to deduct Rs 3 per acre as in Palwal In all other cases the Meo relies on the assistance of his own family and no hired labour is required

Repairs to wells

32 In the Taoru Circle where wells are regularly worked the owner is responsible for keeping the well in good working order In the other two circles it is usual for the landlord to take in his tenant as a partner if the well has to be worked, and in these cases the expenses are shared But here too the majority of the wells are kept in the hands of the owners, and consequently all expenses have to be borne by them In Taoru 5 per cent will be deducted, but in the other circles, as in the case of the menials' dues, no actual deduction will be made, but the fact must be borne in mind when assessing the tract

Failed area allowances

33 The question of the true proportion of the failed to the matured area has already been discussed in paragraph 27 As proposed there 10 per cent will be deducted in the Bangar Circle

Landlord's share of the produce

34 The landlord's share of the produce on the various classes of soil was stated in paragraph 24, and is shown in percentages in the following table.—

Irrigated	Chahi	33⅓
	Nahri . . .	50
Unirrigated	. ...	50

As in the case of unirrigated crops, no further deduction has to be made, the Government share is half that of the landlord's. The same is true of chahi in all circles except Taoru, where the share is 31⅓ per cent, owing to the deduction referred to in paragraph 32. On nahri land the landlord pays half the cost of the seed and half the canal dues, and in the case of cotton he shares the cost of the picking, while in the case of cane there is the cost of cultivation to be taken into consideration. The details of this have been given in the Palwal Report. For purposes of reference I give them again here—

	Rs	a	p
Cost of seed	9	0	0
Share of cost of hoeing	3	0	0
Hire of the press	5	0	0
Pay and food of the jhokn and tarai	7	12	0
Total	24	12	0

To avoid unduly complicating the produce estimate I have worked out separately the value per acre of each nahri crop, and to obtain the total value of the Government share it is only necessary to multiply the area by the value per acre. The rates per acre are obtained by working out the value of a matured acre of each crop (less fodder allowance, *vide* paragraph 30) at the yields assumed in paragraph 28, and the sanctioned prices given in paragraph 29. After deducting the value of the seed sown, the canal dues, and the expenditure mentioned in paragraph 31, the Government share is one-fourth of the remainder except in the case of cane when it is one-sixth.

The gross produce and half-net-asset estimates are worked out in detail in Statement XIII. Before abstracting the results here it is necessary to make the allowance in the Baugru Circle for the serious under-estimate of kharaba alluded to in paragraph 27. In the following table the extra deduction of 10 per cent mentioned there has been made —

It will be seen that the half-net-assets in all circles is considerably higher than the value of $\frac{1}{6}$ of the gross produce This is due to the high rate of batai prevailing on unirrigated soils In Alwar Mr O'Dwyer assumed a rate of $\frac{2}{5}$ths, and this would probably be a fair rate here also.

CHAPTER VI.—HALF-NET-ASSETS BASED ON CASH RENTS.

Deductions and half-net assets rates

35 The results of the examination of cash rents have been described in paragraph 25 It only remains to decide what share of the corrected rents may be taken as equivalent to half the net assets In the Taoru Circle, which closely resembles the Rewari Tahsil, I propose to make the same deductions as those detailed in paragraph 37 of that report. In the Dahar Circle the case is quite different The rent rates are high, and owing to the precariousness of the cultivation the proportion that is unrealisable over a series of years is extraordinarily large I do not think that the position disclosed by the Hiranthala owners' account books is in any way abnormal, on the contrary everything goes to show that efforts have been made to keep collections up to the highest possible pitch, as there is no doubt that the owners have lost heavily owing to the way in which the full demand has invariably been taken from them This indicates a loss of 25 per cent on the declared rental, and I propose to make this deduction It is more difficult to decide what should be done in the Bangar Circle Not only are there no accounts to help us, but the nahri rents are so obviously unrealisable that the whole value of the rents is to a great extent discounted Under these circumstances it seems best to treat the nahri rate as equivalent to the chahi rate for the purposes of the cash rent estimate As to the amount of the deduction to be made, the circle seems to me to be about half way between the Dahar and Taoru Circles in the matter of collections, and I accordingly propose to deduct 15 per cent. from the rental The half-net-asset rates and jamas accordingly are as follows —

1	2		3	4	5	6	7	8	9	10
Circle	Detail		Chahi	Nahri	Floodod	Barani	Bhur	Total cultivated	Present assessment	Increase per cent
Taoru	Rate	Rs	2 5 0		1-7 0	1 2 0	0 10-6	1 3 8		
	Area	Acres	5,385		1,685	26,149	7,946	41,165		
	Amount	Rs	12,452		2,422	29,418	5,215	49,507	36,501	35
Dahar	Rate	Rs	1-7 3		1 7 6	1 8 5	0-15 9	1 7 1		..
	Area	Acres	2,886		26,328	39,698	8,473	77,385		
	Amount	Rs	4,194		38,669	60,581	8,341	1,11,785	1,01,251	10
Bangar.	Rate	Rs	1 13-9	1 6-0	1 6-0	1 6-0	0 11 6	1 5 7		
	Area	Acres	4,876	23,273	1,028	50,929	6,879	86,985		
	Amount	Rs.	9,066	32,000	1,413	69,927	4,944	1,17,350	1,00,366	17
Total	Rate	Rs.	1 15-4	1-6 0	1-7 5	1 5 11	0 12-8	1 6-9		
	Area	Acres	18,147	23,273	29,041	1,16,776	23,298	2,05,535		
	Amount	Rs	25,712	32,000	42,504	1,59,926	18,500	2,92,849	2,38,112	23

The results given by the cash rents are invariably lower than those of the produce estimate. This is of course due to the batai rate, which, as I pointed out when discussing that abstract of the produce estimate, is too severe for this tahsil. In the Firozpur and Dahar Circles the results of the cash rents give to my opinion a very full half-net-assets jama. In the Bangar Circle the result is vitiated by the nahri rents, which are ridiculously inadequate. I have previously suggested that the chahi rate should be assumed to apply to the nahri area in order to correct to some extent this false result. If this be done the nahri jama is raised to Rs 43,273, and the total jama to Rs 1,30,623. Even this is not sufficient, because the produce estimate shows that the nahri land is distinctly more valuable than the chahi, taking into consideration the difference in the proportions of irrigation. This is exactly what would be expected, as the Bangar chahi is inferior, whereas the nahri, though not so good as that in the Palwal Tahsil is still a very good irrigated soil, and one that is particularly useful on account of the inferiority of the chahi irrigation. The half-net-assets nahri cash rent rate in Palwal is Rs 2-12-0 and in Firozpur Re 1-12-6. It is probably fairly correct to assume that the Bangar Circle stands about midway between these two. This indicates a rate of about Rs 2-4-0 for nahri, and if this assumption be made, the cash rent jama will be raised to Rs 1,37,714 which is a fairly close approximation to the produce estimate figures. The difference would then, as in the other circles, be attributable to the rate of batai.

PART II.—FISCAL AND MISCELLANEOUS.

CHAPTER I.—FISCAL HISTORY.

First Regular Settlement

36. The tahsil, as at present constituted, contains 289 villages of Parganas Nuh, Taoru, Hathin, Sohna, Bahora and Palwal. At last settlement there were 311 villages included in the tahsil, and the present numbers are the result of a redistribution carried out by Mr. Channing. The history of the various parganas after annexation is given in paragraphs 8 to 15 of the Nuh Report. Some were farmed out for short periods, but in all cases as soon as settlements were arranged a very heavy Summary Settlement was fixed which proved too much for the people Pargana Taoru broke down and several reductions had to be granted, while all the other parganas were more or less distressed In 1841 Mr. Barnes resettled the whole of the present tahsil, and finding a state of almost universal poverty he granted large reductions, which had a most beneficial effect The jama of the Taoru, Hathin and Nuh Parganas, and of the Bahora, Sohna and Palwal villages was reduced by him from Rs 3,11,697 to Rs. 2,37,448. In the case of the Bahora villages apparently no re-assesement was made.

Mr Channing quotes Mr. Fraser as speaking well of the working of all these settlements, but owing to the destruction of records in the mutiny no detailed account of the working up to 1857 could be given However there seems no doubt that the general condition of the people was good.

Second Regular Settlement

37. The second Regular Settlement was begun in 1872 and completed under circumstances that are well known in 1883. Mr Channing found everywhere signs of great prosperity, and partly owing to the fact that the seasons at that time were particularly favourable, he was led to impose a heavy increase on the tahsil In summing up the position as he found it, Mr. Channing notes that the assessments were the result of reductions in the past amounting to 27 per cent., while on the other hand cultivation had increased by 42 per cent, and the value of produce even at a low calculation by 11 per cent Irrigation had developed, and the increase in population was proportionate to the increase in resources. Transfers were light on the whole, and except in inundated tracts the revenue demand had been paid with great regularity Mr Channing based his proposals upon the results of his produce estimate Except that the outturns in the Dahar Circle were rather high owing to the abnormally good seasons, and were applied to the whole area cultivated during the year of measurement, there is nothing to which exception can be taken in the produce estimate. The value of the gross produce of the whole district as calculated in Form D was Rs 21,48,038, one-sixth of which is Rs. 3,58,007 The total given by the circle rates was Rs 2,72,385 and the jama actually imposed was Rs 2,59,984 This, however, is only for the present 289 villages, and therefore no comparison with the assessment made by Mr Barnes is possible, but the increase was fairly considerable The settlement broke down almost immediately, and Mr. Wilson was appointed to carry out a revision of the demand in 1882 The plan adopted is clearly explained in the Revision Report printed with the Gurgaon Settlement Report, and I do not propose to add to what has already been said there The result of these proposals is given in Appendix H of Mr Wilson's Report and shows a permanent reduction of the demand to Rs 2,41,584, with an additional reduction of Rs 28,187 for seven years. These proposals were sanctioned, and it is with their working that we are principally concerned now In the Taoru Circle the expiring settlement has worked very well, though the average collections are only Rs 31,124 against a demand of Rs 36,501, or 85 per cent In the Bangar Circle also, owing to the introduction of irrigation from the Agra Canal, the general condition of the people is good, but the individual circumstances vary The portion which is now benefited by the canal was originally the worst in the circle, and consequently was lightly treated The result is that now we have part of the circle lightly assessed with all the benefits of irrigation to be

[illegible] to remark, while the remainder, which was not so leniently treated in the first instance, has suffered during the past dry years. Still even here there is a real difference, and on the whole the assessment has worked very well. The [illegible] amounts to Rs 57,[illegible] against a demand of Rs 1,00,860, or [illegible]. As the demand in canal villages has always been collected in full [illegible] this shows that in the unirrigated portion of the circle [illegible] have been required. Turning to the Dahar Circle the first point to which I would call attention is the change introduced by Mr Channing in the fluctuating assessment on the portion now known as Chak Jhal. The villages which lie under liable to flooding from the waters of the Kotla Jhal [illegible] with a fluctuating assessment. The conditions have altered [illegible] since Mr. Channing's time. The enormous fluctuations in cultivation, which were then caused by submersion, are now due to drought, but the effect is the same. At the time of revision some modifications in Mr Channing's proposals were sanctioned, allowance being made for failure, and revenue only levied from harvested crops. This system is most popular, and indeed it is difficult to imagine what would have happened if some such system had not been enforced. But the people are very poor, and the large area out of cultivation shows that they are unable to fully develop their resources. In paragraph 62 of the Revision Report Mr Wilson has worked out the average fluctuating revenue at Rs. 8,586, but the average since 1883 is only Rs 8,487. The remissions in the case of fixed revenue are given in paragraph 18 of the Revision Report, and amount to Rs. 11,661, the jama coming to Rs 1,03,236 against Rs 1,14,617 imposed by Mr Channing. Making allowance for the difference due to the introduction of the fluctuating assessment this was an increase of about Rs 10,000 on Mr Barnes' assessment, but even this has proved too much for the people to pay. Collections have amounted to 84 per cent since 1883, which [illegible] exactly the same as in the other circles. In other respects, however, there is no comparison between the three circles. The Dahar Circle is infinitely the poorest, and in spite of the drainage schemes, which it was thought would improve its condition considerably, there can be no doubt that the account given by Mr. Barnes and quoted by Mr Channing in paragraph 11 of the Nuh Report is [illegible] applicable to the Dahar Circle at the present time. This is I think almost conclusive evidence that this circle cannot stand a heavy assessment, and is not likely to deteriorate under lenient treatment. Mr Barnes found the tract [illegible], great deal from the severe summary assessments that had been imposed, and by judicious reduction of the demand not only saved the circle from [illegible], but annually ensured a fair amount of prosperity during the whole [illegible] of the settlement. The position was not quite so good as appeared to Mr Channing, because the period of settlement was abnormally prosperous for [illegible] entirely dependent on the rainfall. Still the area mortgaged was small compared with the present state of things, and the people were by no means overburdened. Now the droughts, and cattle, and the very serious extent to which [illegible] have taken place indicate real poverty, which a good season [illegible] the [illegible] to avert. No doubt the present position is abnormally [illegible] [illegible] normally good at last settlement, but there is the great difference that the effects of favourable seasons may wear off very quickly, whereas [illegible] take long to handicap the people for a long time. More than [illegible] of the past settlement shows the fatal results of an [illegible] assessment on a tract where the variations in [illegible]

The appended statement shows the suspensions, remissions and collections of revenue during the last 21 years in percentages on the average khalsa demand.—

1	2	3	4	5	6	7	8	9	10	11	12	13
	Suspensions				Remissions				Collections			
Year.	Taoru.	Dahar	Bangar	Total	Taoru.	Dahar	Bangar	Total	Taoru	Dahar	Bangar	Total
1885-86		10 8	02	4 6		10 8	02	4 6	95·9	87 6	100 1	94 1
										Fixed 89·9		95 1
										Fluctuating 5 1		5 1
1886-87		..							97·8	97 3	93 2	95 6
										Fixed 99 8		96 7
										Fluctuating 9 5		9 5
1887-88		6 4	004	2 7	.	6 4	·004	2·7	93 4	84 3	92·5	89·1
										Fixed 86 3		90·0
										Fluctuating 13 4		13 4
1888-89									93 6	90·0	92·4	91 5
										Fixed 91 6		92·2
										Fluctuating 33 6		33·6
1889 90	3·8	9 2	1	4 5	.				97 3	98 2	101·5	99 5
										Fixed 92 7		97·1
										Fluctuating 294 5		294 5
1890-91		2·6		1 1					104 5	106 8	101 8	104 4
		Fixed 2 7		1 1						Fixed 105 0		103 6
		Fluctuating 3								Fluctuating 171·0		171 0
1891-92 ..		1 4		6	..	1 0		4	101 9	110 6	101·8	105 6
		Fixed 2		·07						Fixed 106·3		103·7
1892-93		Fluctuating 44 5		44 5						Fluctuating 264·9		264 9
		1·2		5	..	...		.	101 6	104 2	101·7	102 8
										Fixed 101 3	—	101 5
										Fluctuating 210 2		210 2
1893 94		1 8		·7		1 2		5	101 6	101 1	101 7	101 4
										Fixed 100 4		101 3
										Fluctuating 125 0		125 0
1894-95		7·6		3·3	.	9·3		3 1	101 6	93 8	101·3	98 3
										Fixed 94·3		98 6
										Fluctuating 75·1		75 1
1895 98		6 8	·2	3 0		1·6	03	7	101 6	93 5	101 5	98 0
		Fixed 6 5		2 9						Fixed 95 4		98 9
1896-97		Fluctuating 15·9		15·9						Fluctuating 24 5		24 5
		5 4	3	2 4					101 6	100 4	101 5	101·0
										Fixed 100 8		101 2
1897-98						1 3		5		Fluctuating 85 5		85 5
									101 6	109 2	102·3	105 2
										Fixed 106 5		104·0
1898 99	8	10 3	1 0	4 9						Fluctuating 204·9		204·9
									100 8	89·8	100·8	95·0
										Fixed 91 7		96·9
1899 1900	76 0	80·3	49·2	66 5	.		...			Fluctuating 22·6		22·6
									25 6	·1 3	52 5	35·0
										Fixed 21·6		35 3
1900-01		6·1	3	2·7	.	5·8		3·4		Fluctuating 11 1		11 1
									15 4	116 2	122 4	124·4
										Fixed 117·0		124 8
1901 02	5·0	38·3	10·5	21 2	20·8	75 2	28·9	47 5		Fluctuating 86·5		86 8
									99·4	69·2	92·2	83 3
										Fixed 69 8		83 7
1902-03		9 6	2 1	5·0		..				Fluctuating 47 1		47·1
									105 1	107·5	105·7	106 8
										Fixed 108 5	..	107 2
1903-04	1 3	22·5	7·7	13 1	..					Fluctuating 70·6		70·6
									101·4	81 5	94 1	98·7
										Fixed .. 81·0	..	98·6
1904-05		...						..		Fluctuating 100·7		100·7
									104·2	105·2	111·8	116 5
										Fixed .. 123·2		115·6
1905-06 ..	11·0	57·2	32·2	39·2		2·4		1·0		Fluctuating 219·0	..	219 0
									90·6	44 2	60·2	
										Fixed 44 5		
										Fluctuating 25 4		

The remissions in 1901-02 were on account of the Coronation, and 1905-06 were of sums outstanding for more than three years

The amount under suspension at the end of Rabi 1907 was as follows.—

1	2	3	4	5
	Taoru	Dahar	Bangar	Total
1 On account of previous years ...	..	23,075	2,915	25,990
2 Do 1905-06	3,799	56,696	31,924	92,419
3 Total ...	3,799	79,771	34,839	1,18,409
4 Proposed for recovery with rabi instalment of 1907	1,459	15,592	14,528	31,579
5 Proposed for remission (rabi 1907)		8,960	132	9,092
6 Total proposed recoveries and remissions ..	1,459	24,552	14,660	40,671
7 Balance outstanding ...	2,340	55,219	20,179	77,738

All unrecovered balances existing when the new demand is announced should be remitted

CHAPTER II.—MISCELLANEOUS.

Consumption of food

38 The total population at the last census was 145,931 Separate figures for the children of each tahsil are not available, but taking the average of the whole district the figures are—

1	2	3	4
Detail	Males	Females	Children under ten (excluding infants)
Urban .	8,864	8,160	3,968
Rural	46,578	42,805	20,835

Infants have been estimated to number 10 per cent of the total population The diet of the zamindars of the district has been described in the Rewari Report. I do not think that any changes need be made for this tahsil, and shall therefore adopt the same scale of diet as was assumed there For purposes of reference it is shown in the following table —

1	2	3	4	5	6	7
	Males		Females		Children	
	Chataks per diem	Maunds per annum	Chataks per diem	Maunds per annum	Chataks per diem	Maunds per annum
Urban ..	10	5 3/4	8	4 1/2	6	3 1/4
Rural ...	12	7	9	5	6	3 1/2

The total annual consumption is therefore 714,569 maunds The yield of food grains is given in the detailed produce estimate, and the tahsil totals in maunds, after making the fodder deductions shown in paragraph 30 are as follows —

Jowar ..	60,622	Chaula	11,978
Bajra	239,847	Wheat	59,792
Maize	1,209	Barley ..	166,340
Mung	12,446	Gojra ..	12,623
Mash	1,707	Gram	127,236
Moth	6,516	Goshni ..	47,832

Except in the case of wheat, the amount of seed sown, and the failed area percentages may be taken to be the same as in the Palwal Tahsil. The large flooded area sown with a wheat crop, and the peculiar system of well irrigation must be taken into account, and I have therefore allowed 20 per cent. for wheat as for barley, and also for the mixtures. The deductions for conversion into flour are given in the appended table :—

Jowar, Bajra, Maize	1¼ per cent.	Barley, 10 per cent.
Wheat, Pulses, Mixtures	5 per cent.	

The result of the above calculations is tabulated as follows :—

1 Crop	2 Seed per acre in sers	3 Percentage of failed area.	4 Total amount of seed sown in maunds	5 Net produce in maunds.	6 Net produce converted
Jowar	15	25	7,965	53,657	52,627
Bajra	3	25	5,119	234,728	231,794
Maize	7	14	38	1,171	1,156
Mung	3	25	424	12,022	11,421
Mash	3	25	51	1,657	1,575
Moth	5	25	330	6,184	5,875
Chaula	1	25	117	11,861	11,288
Wheat	50	20	10,307	49,485	47,011
Barley	50	20	29,778	136,562	122,906
Gojra	50	20	2,387	10,236	9,715
Gram	25	22	14,106	113,130	107,473
Gochni	40	20	7,371	40,561	38,533
Total	...	...	...	6,70,254	6,41,354

This gives a deficit of 73,215 maunds of food crops yearly. There is, however, a large area of non-food crops, the total value of which, as taken from the produce estimate, is Rs. 3,98,292. In the above calculations half the value of the cane, and one-tenth of the value of the cotton have been deducted as part of the cost of production, and some further deductions are necessary on account of seed. This does not leave a very large margin to provide clothing and the necessaries of life, but the calculations can at best be only a rough guide. Unfortunately no figure of exports and imports are available, as the railway does not run through the tahsil, and consequently it is impossible to apply any test to these assumptions. The people do not as a rule, either in their dress or style of living, give any indication of prosperity, and except in the canal tract, there is a good deal of poverty. To some extent the constitutional thriftlessness of the Meo is responsible for this, as even with a light assessment and a hardy soil, such as is found in the Taoru Circle, he cannot be said to be really prosperous, but there can be no doubt that the recent dry cycle has had a great effect on the welfare of the tahsil as a whole, and of the Dahar Circle in particular. This is important in this connection, as the Dahar Circle is the only one which is capable of showing any great variations in cropping according to the state of the seasons. While, therefore, admitting the general poverty of the tahsil, I do not think that the position is quite as bad as these figures make out, and under normal conditions the tahsil may be assumed to be self-supporting.

PART III.

CHAPTER I.—THE ASSESSMENT.

39 The leading statistics relating to the assessment of the various circles are summarised in the accompanying table. There is nothing that calls for special mention here, but where necessary it will be referred to in the following paragraphs dealing with the proposals for the various circles.—

Statement of statistics

1	2	3	4	5
	Taora	Dabar.	Bangar	Total Taluka
Percentage of cultivated to total area	74·7	78 8	88 5	81 6
Increase of cultivation per cent	1 4	6	6	8
Percentage of chahi irrigation to total cultivation	7	1	2½	3
Do. nahri do. do			18½	7½
Increase of irrigation per cent	19	97	1,189	398
Percentage of abi to total cultivation	3	8	1	4
Do dahri do	1	29	1	12
Do superior barani to total cultivation	63½	48¾	58½	55¾
Do. bhur to total cultivation	19	10	8	11
Increase per cent of wells in use	89	171	106	105
Do of lacs	5½	26	24	14
Percentage of sweet wells (excluding dhenkhs)	98	61	48	73
Average depth to water of pakka wells in feet	35	18	29	27
Do of water do	20	15	26	21
Average area irrigated per pakka lac in acres	4	2	2	3
Decrease per cent of bullocks	23	31	2	18
Increase or decrease per cent of ploughs	—14	—22	1	—11
Cultivated area per plough in acres	17	22	16	18
Increase or decrease per cent of population	+29	—8	+48	+21
Incidence of rural population per square mile of cultivation	465	309	417	421
Average area in acres per owner	8	7	7	8
Percentage of good cultivators, "Jats and Ahirs," to total owners	14	4	48	23
Percentage of cultivated area sold since settlement	4	6	2	4
Average sale price per acre in even rupees	41	29	57	36
Percentage of cultivated area under mortgage	24	38	24	29
Average consideration money per acre in rupees	40	41	58	46
Amount of unsecured debt in rupees	2,70,925	3,88,069	2,50,013	9,09,007
Percentage of above on land revenue (1905-06)	712	881	249	381
Do matured to cultivated area—				
Irrigated	57	26	51	52
Dabri	46	26½		27
Superior barani	125	126	124	126
Bhur	97½	78	84	86½
Total	107½	80	99	93½
Percentage of failed to matured crops—				
Irrigated	9	16¾	11	4½
Unirrigated	15	28	18	21
Percentage of area cultivated by owners	61	56	62	60
Do do tenants-at-will paying cash rent (not being at rackrent rate)	17	17	11	14

40 This circle contains 81 villages, and at present is doing very well. The soil, though light, is wonderfully fertile, as the cropping returns clearly show. On the other hand no first class crops are produced, and I have assumed low yields throughout. Taking the various soils in detail, the chahi is fair and shows satisfactory development, the value of kachcha wells having been amply

demonstrated. Although the recent drought may have been responsible for some of this development originally, the system is now so popular that I do not think there need be any fear of a contraction of irrigation in the future: on the contrary it is more probable that after settlement there will be a further increase, as the tendency is for irrigation to be rather restricted during a settlement, in order to avoid a chahi assessment. The position of the flooded lands has now greatly improved. The drainage from the hills has been controlled by some excellent bunds, with the result that in place of rather precarious dahri, the circle now contains good abi. In the statistics in the previous paragraph the two soils have been classed together, but the superiority of the abi is shown in the following comparison of their matured areas, which put in the form of percentages are—

Abi	110
Dahri	63

This is perhaps an exaggeration of the difference between the two soils, but there can be no doubt that the abi is distinctly the better soil of the two. For this reason I propose to retain the present system of levying abiana from these bunds. Not only will this serve to equalise the difference between the flooded soils, but in the case of land that may be brought within the operation of the bunds in future it will be useful The bund system is capable of very great improvement, and if this be carried out, the flooded area will be substantially increased. Finally the operation of properly controlled floods is extremely beneficial to the light Taoru soil, and this advantage over the dahri land can be best accounted for by a fluctuating rate The present abiana rate is 8 annas per pakka bigha. The rates proposed by Diwan Tek Chand in his No 207 L F, dated 30th April 1904, to the Commissioner Delhi Division, which was forwarded to Government with Commissioner's No 208, dated 9th May 1904, were Re. 1 per pakka bigha for all the bunds in the Nuh Tahsil, but these proposals have not as yet been put into force From the produce estimate it will be seen that the difference between the value of a matured acre of abi and barani land is Re 1. As I am proposing to assess abi land at a higher fixed rate than barani, I think that a fluctuating rate of 8 annas per pakka bigha, or Re 0-12-9 per acre will be sufficient In other respects there has not been any great development since last settlement Population has increased, but there is not a corresponding increase in cultivation, while bullocks and ploughs have actually decreased. The results of the produce estimate and cash rents indicate that a large increase can be taken, but there are the following reasons for caution. In the first place the circle has always been lightly assessed in the past. It is natural to compare the rich soil below the hills with this sandy table-land, and fix much lower rates for it than for the Dahar Circle This is to some extent incorrect, as the circle, though lighter, is far more secure than the heavy clay and loam lands On the other hand the circle is divided up into small estates owned by Meos, who never manage to accumulate any wealth, and cannot stand any very great increase in their assessment

The rates adopted by Mr. Channing and Mr. Wilson are compared with those deduced from the produce and cash rent estimates in the following statement:—

1	2	3	4	5	6	7	8	9
	Chahi.	Abi dahri	Narmot.	Magda.	Bhur.	Rate on total cultivation	Jama.	Actually assessed.
	Rs a	Rs a	Rs. a	Rs. a	Rs a p	Rs a p	Rs	Rs.
Mr Channing ..	2 8	1 12	1 2	0 14	0 9 0	0 15 4	39,789	38,988
„ Wilson ..	2 1	1 8	1 2	0 14	0 7 0	0 14 6	36,097	.
Produce estimate ...	...	...		..	.	1 7 5	59,900	..
Cash rents ..	2 5	1 7	Re 1-2-0		0 10 6	1 3 3	49,507	..

The very high rate of batai is responsible for the difference between the jama according to the produce estimate and that given by the cash rents. In Section 26 of the Nuh Report Mr. Channing notes that only 3 per cent of the tenancy lands were held on kind rents, the usual rate being one-third. I do not know what has been responsible for the change, but the universal rate throughout the whole tahsil is now one-half. The area under cash rents is not large, but the proportion has risen from 7 per cent to 17 per cent. of the cultivated area, so the rents may be taken to be fairly representative, especially as the largest number are on the characteristic magda soil of the circle.

The rates which I propose are—

1	2	3	4	5	6
Soil	Rate	Area	Demand	Total	Incidence
	Rs a p	Acres	Rs	Rs.	Rs a. p.
Chahi pakka	2 4 0	3,897	8,768	...	.
„ kacheha	1 12 0	1,488	2,604	..	...
Flooded . . —	1 4 0	1,685	2,106	..	..
Barra	0 15 0	26,149	24,515	...	...
Bher	0 8 6	7,946	4,221	42,214	1 0 5

This is an increase of 14 per cent. on the present assessment It is 82 per cent. of the cash rent estimate, and 71 per cent. of the half-net-assets as given by the produce estimate after making the necessary deductions. It is only slightly more than one-eighth of the gross produce, and may therefore be considered to be rather light, but the circle is not wealthy, and I think that the increase is quite as much as can safely be taken. The proportions of the proposed rates agree fairly closely with those of the cash rents. The chahi rate appears to be high, but the area cash rented is very small, and is hardly representative of the chahi of the circle. Moreover, the kacheha chahi is being assessed at a lower rate on account of its instability, so that there is a fair difference between the proposed rate and the rent actually taken. My village assessments in the villages which I have inspected for assessment give a total of Rs 19,147 against an existing demand of Rs. 16,720, or an increase of almost exactly 14 per cent.

The Palwal Circle.

41 This circle contains 106 villages At last settlement Mr Channing found it in a very prosperous condition The reductions granted by Mr Barnes at the previous settlement had enabled the tract to recover from the poverty in which he had found it, and a series of good harvests still further improved the position The danger which Mr Channing had to face was that owing to excessive flooding a great deal of the dahri area was liable to submersion, and so in a year of good rainfall large remissions of revenue were necessary The part most affected by this was the Kotila Jhil land, which for three years had been almost totally submerged In order to cope with this Mr. Channing proposed that this area should be given a fluctuating assessment, and this was eventually sanctioned Mr Wilson, when revising the assessment, came to the conclusion that the rules required further modification in favour of the zamindars and accordingly proposed the rules contained in paragraph 62 of the Revision Report, which are still in force The number of villages affected by this arrangement is seven, and the total area under fluctuating assessment is now 4,152 acres. A slight modification of the fixed and fluctuating areas may be found necessary to agree more closely with the wishes of the people, but the difference will be small and details can be settled after the cancellation of Government to

the general proposal has been obtained The position has of course entirely altered since settlement owing to the way in which the Kotila Jhil has been drained, but the effect is the same ; where formerly they suffered from submersion, drought now causes at least as much distress. All the villages under the fluctuating assessment are wretchedly poor, and the appended statement will serve to show how the area capable of cultivation varies according to the seasons. I do not propose to make any change in the existing arrangements as there is no justification for any increase in the rate to be applied to the matured area, while the fluctuations of cultivation indicate that a fixed assessment is not advisable. In this connection I would refer to paragraph 46 of the Firozpur Report. As in that tahsil none of the villages were ready for inspection, but as far as I can see no change in the rates or rules is called for. With regard to the land, which, though coming under the fixed assessment, was liable to submersion, Mr Channing proposed that if in any village 10 per cent. of the lands were submerged in one harvest the revenue demand on the submerged area should be remitted. This rule is I think no longer required. Under the present conditions it seems likely that only a very small area is liable to be submerged in a year of ordinary rainfall, and in an abnormal season it is better that the Deputy Commissioner should be free to use his own discretion as to remission without being tied down by any rules as to the proportion that must be submerged before relief can be claimed. Moreover, the difficulty in the future is likely to be one of drought rather than of overflooding, and the 10 per cent rule seems unnecessary, but the importance of careful revenue administration cannot be too strongly emphasised. Mr Channing made a similar remark in Section 220 of the Settlement Report, but his idea that the tract requires a heavy assessment does not seem to have been borne out by the fiscal history The great prosperity that attended the reduced assessment imposed by Mr Barnes shows either that the people will work with a light assessment or else that the ideas of what constituted a light assessment were wrong Certainly Mr. Channing's demand was extremely heavy It was based on the results of a produce estimate which contained the cultivated area of a single year admittedly far above the average, and though the commutation prices appear to have been moderate the outturns assumed—especially on the large flooded area—were somewhat high. Mr Wilson made considerable reductions at revision but even this demand has proved too heavy for the people to pay, and there are now unmistakeable signs of distress. Cultivation had reached its limit at last settlement, and though population has not increased to any great extent both mortgages and sales are far too common, and the unencumbered area is terribly small Ploughs and bullocks have decreased, and there is a general state of indebtedness, from which the people will take a long time to recover The rates adopted by Mr Channing and Mr Wilson are compared with those deduced from the produce and cash rent estimates in the following table :—

1	2	3	4	5	6	7	8
	Chahi	Flooded	Chiknot and narmot	Magda	Bhur.	Rate on total cultivation	Jama
	Rs a p	Rs a p	Rs a p	Rs. a p	Rs a p	Rs a p	Rs
Mr Channing	2 8 0	2 0 0	1 6 6	1 4 0	0 10 6		
Mr Wilson	2 0 0	1 12 0	1 5 0	1 2 0	0 7 0		
Produce estimate	..	...	...		...	2 2 5	1,26,093
Cash rents ..	1 7 3	1 7 6	1 8 5		0 15 9	1 7 1	1,11,785

Statement of the cultivated and matured areas in the villages now paying fluctuating assessment.

1	2	3	4	5
Year	Fluctuating area	Area matured	Area failed	Total area sown
Last Settlement	6,812	4,355	...	7,935
1883-84	7,908	5,795	3	5,798
1884-85 ...	7,908	2,981	..	2,981
1885-86	7,910	234	35	269
1886-87 .	7,917	298	9	307
1887-88 ...	7,000	417	54	471
Total of five years	38,643	9,725	101	9,826
Average of five years	7,729	1,945	20	1,965
1888-89 ..	1,355	1,193	77	1,270
1889-90	7,326	6,582	453	7,035
1890-91	7,415	3,820	183	4,003
1891-92	7,463	6,891	154	7,045
1892-93	7,397	3,694	144	3,838
Total of five years .	30,956	22,180	1,011	23,191
Average of five years	6,191	4,436	202	4,638
1893-94	7,398	2,894	85	2,979
1894 95 .	7,205	2,203	86	2,289
1895 96	7,029	956	674	1,630
1896-97	7,155	1,786	1,046	2,832
1897-98	7,324	4,574	1,008	5,582
Total of five years ...	36,111	12,413	2,899	15,312
Average of five years	7,222	2,483	580	3,062
1898 99 . .	7,362	553	1,101	1,654
1899-1900	7,378	265	1,904	2,169
1900-01 .. .	7,270	2,541	1,129	3,670
1901-02	7,274	1,060	1,236	2,296
1902-03 ..	7,149	1,579	774	2,353
Total of five years	36,433	5,998	6,144	12,142
Average of five years	7,287	1,200	1,229	2,428
1903-04	7,165	2,242	1,205	3,447
1904-05	7,162	5,269	915	6,184
1905 06 . .	7,187	569	2,387	2,956
Total of 23 years	163,657	58,396	14,662	73,058
Average of 23 years	7,116	2,539	637	3,176

As elsewhere in this tahsil the difference between the jama given by the produce estimate and that of the cash rents is due to the high rate of batai which prevails. The cash rent jama is that given after making the deductions for non-realisation. The extraordinary similarity of all rents except those on bhur shows that at present no difference is being recognised between the various classes of soil. In the case of the flooded lands I think that this is only temporary. When seasons are bad the first land to suffer is the heavy abi or dahri, which deprived of its normal moisture is practically useless. The result of the recent bad harvests has been to diminish the value of this land, but there can, I think, be no question of its real superiority. To a less extent the same is true of the chahi At first sight it would seem that in a tract where the wells are purely protective a series of dry years would tend to increase their value, and this would be the case here but for the fact that the water is as a rule so salt that its continued use is most harmful to the soil. Moreover, owing to the poverty of the people, the expense of working a well makes it unpopular at the present time While therefore, admitting the similarity between the two cases I should say that the depreciation in value of the chahi land will be more lasting than in the case of flooded lands, as in the former instance the recovery depends upon the recovery of the circle which is likely to be very slow: on the other hand the value of flooded land will go up at once with the advent of one or two good harvests, and this will be the chief factor in restoring the general prosperity of the tract. Accordingly in my rates I have recognised no superiority of well lands over abi and dahri, but have not maintained the close similarity between the various soils that is indicated by the cash rents. I propose to assess all abi land to a fixed assessment, and not levy any abiana in this circle I except from this rule the irrigation by sluices on the Khalilpur and Qutabgarh Bunds, which will ordinarily pay a barani assessment, but when flood water is received a fluctuating rate will be charged For these lands and any others which, under the new rules that are being proposed, may become liable to pay a fluctuating rate, I propose that a rate of 10 annas per pakka bigha be sanctioned. This is very nearly the amount of the difference between the values of a matured acre of flooded and barani land as shown in the produce estimante, and is as high as I think can fairly be imposed.

The rates which I propose are—

1	2	3	4	5	6
Soil	Rate	Area	Demand	Total	Incidence
	Rs a p	Acres	Rs	Rs	Rs a p
Chahi and Flooded ...	1 7 0	29,214	41,995		
Barani	1 3 6	39,698	48,381		
Bhur	0 10 0	8,473	5,296		
				95,672	1 3 9

The new demand is 81 per cent of the cash rent estimate and 73 per cent of the half-net-assets as given by the produce estimate It is almost exactly one-seventh of the gross produce, which under present circumstances is fully as high a proportion as can be taken from the circle My assessments in the villages which I have inspected come to Rs 35,261 against a present demand of Rs 36,587, or a decrease of 4 per cent against one of 6 per cent according to my proposals.

The Bangar Circle

42. This circle contains 99 villages Like the Dahar Circle it was heavily assessed at last settlement, but fortunately, owing to the introduction of canal irrigation, it is in a most flourishing condition now, though of course the area which is not served by the canal presents a marked contrast remainder The soil is a fair level loam, and in a good year crops are nearly equal to those of the Dahar Circle The canal extreme edge of the distribution area, and consequently there is of water. Very few cases of water-logging have come to the soil has undoubtedly been weakened by irrigation in pla difficulty in assessing the tract now is that the unirrigated area

the best at last settlement and so while the introduction of the canal would have made the assessment light on that portion in any case, we find that the prosperous villages were more leniently treated than those which have not as yet benefited by the canal at all The statistics of the circle as a whole do not emphasise this position, and I have therefore drawn attention to it here, as it has a very important bearing on the amount of increase that can safely be taken Apart from canal irrigation the circle is singularly devoid of advantages The wells are merely protective as in the Dahar Circle, and the water being generally salt they are little used There is no flooded land, and very little benefit has been derived from the bunds. It is therefore hard to imagine a greater contrast than that presented by the two parts of this circle Certainly there is not the same poverty as exists in the Dahar Circle, because the people as a whole are more thrifty, but on the other hand the canal villages are extremely well off, and could have afforded to pay a higher revenue than has been exacted The rates adopted by Mr Channing and Mr. Wilson are compared with those deduced from the produce and cash rent estimates in the following statement —

1	2	3	4	5	6	7	8	9
	Chahi	Nahri	Flooded	Chiknot and Narmot	Magda	Bhur	Total cultivation	Jama
	Rs a p	Rs a	Rs a	Rs a	Rs a	Rs a. p	Rs a p	Rs.
Mr Channing	2 10 0		1 12	1 4	1 1	0 10 6	1 3 9	1,05,772
„ Wilson ..	1 12 0	„	1 4	1 4	1 0	0 6 0	1 2 9	1,00,444
Produce estimate .			„	.	.		1 13 5	1,51,408
Cash rents „	1 13 9	1 6	1 6	1 6	1 6	0 11 6	1 5 7	1,17,350

The present assessment is Rs 1,00,360, and the increase given by the kind and cash rent jamas is 56 per cent and 17 per cent respectively As pointed out in paragraph 35 the nahri cash rent rate is unreliable, and should be increased to about Rs. 2-4-0, making the total jama Rs 1,37,000, and giving an increase of 37 per cent The difference between the two jamas may then be attributed entirely to the high rate of batai I have made no difference between the abi and unirrigated rates, as the area of abi land is too small to afford any real indication of its letting value The unirrigated rates may be compared with those in force in the Dahar Circle The higher chahi rate does not indicate superiority in the well irrigation, but is the result of the greater prosperity of the circle, which allows advantage to be taken of the wells to a degree impossible there

Turning to the actual assessment, I must begin by noting that I propose to levy a fixed assessment on canal lands, as was done in the Palwal Tahsil The point has been discussed in paragraph 41 of that report, and here too I shall make no distinction between "lift" and "flow" irrigation for the same reasons as were given there The difficulty of taking a full increase from the canal villages has already been touched upon Most of the canal area was leniently assessed at unirrigated rates, and no attempt has been made to give Government a share in the increased profits that have accrued for some years past Consequently in some cases a full half net assets demand would entail a perfectly impossible increase in the revenue Probably a short term assessment would be best for this tract, but as the orders of Government have already been asked for on this point there is nothing further to say If progressive assessments are sanctioned, the necessary proposals will be put forward later

The rates which I propose are—

1	2	3	4	5	6	7
Soil	Rate	Area	Demand	Total	Incidence	REMARKS
	Rs a p	Acres	Rs	Rs	Rs a p	
Chahi	1 8 0	4,876	7,314			
Nahri	1 11 0	23,273	39,273			
Barani	1 3 6	51,957	65,321			Barani includes 1,028
Bhur	0 10 0	6,879	4,299	1,14,267	1 5 0	acres of flooded land

This gives an increase of 14 per cent. My village assessments in the villages inspected by me give a total of Rs. 48,743 against a previous assessment of Rs. 43,983, or an increase of about 11 per cent. I had originally proposed an increase of only 12 per cent., but the present rates have been arrived at in consultation with Mr. Gibson, with whose suggestions I entirely agree. I do not think that the village notes require revision at present, but if after inspecting the remaining villages this is found necessary, I do not anticipate that there will be any difficulty in making the slight enhancement. The new demand is 83 per cent of the corrected cash rent estimate and 73 per cent. of the half net assets as given by the produce estimate It is over 97 per cent of the actual cash rent jama, and if there were the slightest fear that the nahri rents represented the true state of things, it would be impossible to approach so closely to it. This point has, however, been fully discussed, and I will merely repeat that I think that the corrected estimate is as near the truth as one can hope to get with an assumption as against actual facts.

Total proposed assessment

43. By these proposals the fixed demand of the tahsil is raised from Rs. 2,38,113 to Rs 2,52,093, giving an increase of nearly 6 per cent The incidence on the cultivated area is Re 1-3-7 per acre. I have not included the assessment of the fluctuating area, as it is impossible to estimate with any accuracy what the yearly collections from it will be At present owing to the dry seasons, the demand rules very small. However as no change is being proposed in the existing arrangements, it would probably be better to omit it from our calculations in any case

Comparison between the old and new methods of assessing abi land.

44. Before leaving the question of assessment it will be as well to summarise the effect of the new proposals regarding the method of dealing with abi land. From the attached statement of the receipts of abiana from bunds in the Nuh Tahsil, it will be seen that the average receipts amount to Rs 2,826 per annum. The abi area in the Dahar Circle is now 6,615 acres (Statement II), and according to the new proposals this will be assessed at Re. 1-7-0 per acre, or Re. 0-5-5 per acre above the all-round barani rate This gives a total advantage of Rs. 2,239. In the Taoru circle 1,088 acres are assessed at Re 1-4-0 against an all-round barani rate of 13 annas, giving a total advantage of Rs 476. To this must be added the abiana from the Taoru bunds, which according to the statement comes to Rs. 582 per annum. The total advantage according to the new system is therefore Rs 3,297, or a net advantage of Rs. 471 over the present abiana system. As a matter of fact the advantage is probably even greater, as the amount of abiana collected of recent years has been much smaller, and the average collection includes some of the first years, when the flooded area was abnormally large. Even granting that the existing position is principally due to the recent drought, it must be remembered that for some time abiana was levied off dahri land, and in fact this practice has only recently been stopped. Under these circumstances we are probably justified in assuming the net advantage under the new system will not be less than Rs 471, and may well be more That it will be a popular departure with the people I have no doubt, as in the Dahar Circle the abiana system is hated, and the almost universal request has been that it may be abandoned.

Statement showing the annual collections of abiana in the Nuh Tahsil

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Year	Names of bunds												Remarks
	Kotla.	Qutabgarh	Khalilpur	Taoru Bahora road	Taoru	Dhulavat	Rahori	Sabras	Palla,	Palri	Akora	Total	
	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	Rs a p	
1893-94	5,232 11 0		33 12 3			55 5 6			9 11 3	3 7 6	503 13 0	5,838 13 3	The average collection is Rs 2,826
1894-95	3,969 9 6	3,436 14 7	247 15 9	863 0 3	467 10 0	90 0 6		9 2 6	1 6 3		59 3 3	9,144 14 7	
1895 96	300 6 0	601 8 0	726 5 0	365 4 0	126 7 6	56 12 0						2,182 11 6	
1896 97	4,123 6 0	2,742 13 11	303 15 0	375 8 3	100 2 9	68 15 0			14 9 0	11 6 6	502 12 9	8,849 9 2	
1897 98	15 10 9			625 9 6	158 13 2	27 4 6			16 6 6	17 11 6		861 7 11	
1898 99	75 14 5			413 12 0	192 6 6	28 11 5	51 13 0					762 10 4	
1899 1900				10 0 0								10 0 0	
1900 01	560 10 7	1,664 4 5	651 5 4	421 2 9	202 3 6	40 11 5	110 15 7	118 7 5	13 15 9	10 7 3	45 12 0	3,869 15 0	
1901 02	33 3 2	78 5 3	166 15 0	266 8 5	209 1 3	47 10 0	193 5 3	44 14 3	0 10 4		20 12 6	991 6 2	
1902 03	719 14 2	919 5 0	350 9 10	404 11 9	233 3 3	15 10 0	255 1 5	80 14 6	6 5 6	1 14 5	24 12 8	3,092 7 3	
1903 04			8 6 0	25 11 0	48 11 8	35 4 7	30 8 0	0 10 4			45 9 6	194 13 10	
1904 05	351 2 1		43 14 2	174 13 6	39 1 9	53 9 0	28 9 10	28 8 9			28 13 2	751 8 9	
1905 06	25 10 2			122 13 9	152 2 8	22 7 1	30 5 3	12 1 8	0 1 7	2 11 3	20 4 4	388 9 7	
Total	15,417 2 7	9,443 3 11	2,533 1 1	4,118 15 2	1,935 15 0	572 5 0	630 11 4	324 11 3	63 2 2	47 10 5	1,651 13 11	36,738 14 10	
Average	1,185 15 0	726 6 6	194 13 10	316 13 6	148 14 8	44 0 5	48 8 3	24 15 8	4 13 8	3 10 8	127 1 1	2,826 1 2	

CHAPTER II —MISCELLANEOUS

Protective leases

45. Owing to the peculiar system of irrigation in force in this tahsil it is difficult to put up any proposal for protective leases by which the cultivator can be adequately recouped. No definite scheme can be made until orders are received upon the proposals made in the Rewari Report, but the following details will suffice to show what the problem in the Nuh Tahsil is :—

1	2	3
Circle	All-round barani rate	Government share of the profit due to irrigation
	Rs a p	Rs a p
Taoru . ..	0 13 0	2 0 0
Dahar	1 1 7	1 0 0
Bangar	1 2 4	1 0 0

Where there is so little regular chahi it is impossible to make any difference between the ordinary barani crops and those grown without irrigation on chahi land Indeed in some places in the Dahar and Bangar Circles the effects of irrigation are to injure the succeeding dry crops, and this counterbalances any advantage of situation or manuring that would otherwise have to be taken into account

The results of the calculation therefore are as follows .—

1	2	3	4
Circle	Area in acres irrigated per pacca well, Statement III, columns 6 and 33	Owner's annual net profit	Cost of pacca well
		Rs	Rs.
Taoru .	7⅔	30	750
Dahar . .	4½	9	450
Bangar	6	12	750

Rules for wells falling out of use

46 The rules in Financial Commissioner's Circular letter No 5890, dated 30th September 1904, as amended by Financial Commissioner's Circular Memo No. 1, dated 10th April 1907, are suitable and should be extended to this tahsil In the Taoru Circle where irrigation is regular and the chahi land valuable, it is probable that a number of villages will distribute their revenue on soil rates In the other circles the tendency appears to be to an all-round rate

Rules for canal villages

47. The various questions arising out of canal irrigation have been dealt with in the Palwal Report The rules in force should be the same as far as possible over the whole area irrigated by the Agra Canal Certainly in the Nuh Tahsil there are no special features that call for any separate treatment I have elsewhere stated that in my opinion a short term assessment would be better than progressive assessments in certain villages, but if the latter system is adopted a separate scheme will be submitted as soon as all the villages have been inspected.

Rules for abi land

48 In paragraph 52 of the Firozpur Report detailed proposals for rules to regulate the assessment of abi land have been submitted. It is advisable to have only one set of rules for the district, and I have nothing to add to those

proposals. But assuming that they are sanctioned, it will be necessary to make certain exceptions in the Nuh Tahsil I therefore propose to make the following addition to Rule 1 (*a*) —except (*i*) the land classed as abi in the Taoru Circle, and (*ii*) the land inside the Khalilpur and Qutabgarh bunds in the Dahar Circle, which is irrigated by means of sluices As regards (*b*) it should be laid down that the chahi land in the village of Qutabgarh, which is situated inside the bund is not referred to in this sub-section. This explanation is necessary, as the sluice is always opened at the request of the people, and the water has to pass over land, which is protected by the wells, though the latter are never used in a year when the flooding is sufficient The position of this land will be taken into account in the village assessment and no abiana should be levied

Term of settlement and date of imposition of new demand

49 The term of settlement, which is suitable is 30 years. If a shorter term is finally sanctioned for the canal villages in the other tahsils, it will be advisable to fix the same term here as well, but no orders are required on this point at present The existing settlement expired with the rabi instalment of 1907. In paragraph 53 of the Firozpur Report it has been shown that there is no possibility of the new demand being imposed before Kharif 1908, and provided that orders are received in time, that date will be suitable for this tahsil also.

Cesses

50. The sanctioned cesses are—

	Rs	a	p
Local rate . . .	8	5	4
Lambardari	5	0	0
Total . .	13	5	4

These should be continued.

Points on which orders are required

51. The points upon which orders are required are—

(*a*) The proposed rates and assessments including the method of assessing nahri and abi lands (paragraphs 40—42).

(*b*) Adoption of the rules for the remission of the wet assessment when a well falls out of use (paragraph 46)

(*c*) Adoption of the rules proposed in paragraphs 47 and 48 of the Palwal Report, if they or similar rules have been sanctioned (paragraph 47)

(*d*) Adoption of the rules proposed for lands flooded by water from bunds, but not classed as abi (paragraph 48).

(*e*) Cesses (paragraph 49)

(*f*) Date of Imposition of the new demand (paragraph 50)

GURGAON
Dated 8th October 1907.

G M. BOUGHEY,
Assistant Settlement Officer